Before the
Federal Communications Commission
Washington, D.C. 20554

In the matter of	)	
	)	
Amendment of Parts 2, 73, 74 and 90 of the	)	
Commission's Rules to Permit	)	ET Docket No. 03-158
New York Metropolitan Area	)	MB Docket No. 03-159
Public Safety Agencies to Use	)	
Frequencies at 482-488 MHz	)	
	)	
	)	

Notice of Proposed Rulemaking

Adopted: July 7, 2003 **Released: July 10, 2003**

Comment Date: 30 days from publication in the Federal Register
Reply Comment Date: 45 days from publication in the Federal Register

By the Commission: Commissioner Martin issuing a statement.

1. The Commission has before it a Report of the Police Department of the City of New York (NYPD), submitted on December 5, 2002, regarding the allocation of TV Channel 16 (482-488 MHz) in the New York Metropolitan Area.[1] Specifically, the NYPD, on behalf of itself and the other public safety agencies comprising the New York Metropolitan Advisory Committee (NYMAC) (collectively Petitioners) states that there is a need to reallocate TV broadcast Channel 16 (482-488 MHz) in the New York City Metropolitan Area to the land mobile service for public safety communications on a permanent basis. For the reasons discussed below, we grant the Petition and initiate a proceeding wherein we propose to reallocate Channel 16 and solicit comments on various aspects of the technical implementation of our proposal. We believe that this action is in furtherance of the Commission's ongoing efforts to facilitate effective public safety communication and to promote interoperability.

I. BACKGROUND

2. In 1995, the Commission conditionally waived Parts 2 and 90 of its rules to allow the temporary assignment of frequencies in the 482-488 MHz band to public safety agencies in the New York City metropolitan area. As a result of this action, public safety use of the frequencies was permitted for a period of at least five years or until a television broadcast station in the New York City metropolitan area initiates use of Channel 16 for advanced television broadcast operations, whichever is longer.[2] In that

[1] Letter to the Honorable Michael Powell, Chairman, Federal Communications Commission from John E. Gilmartin, Deputy Chief, The City of New York Police Department (December 5, 2002). Attached to the letter is a "Report of the Police Department of the City of New York," which is also dated December 5, 2002. We will treat the Report as a petition for rulemaking (Petition). A copy of the Petition is attached as Exhibit B.

[2] *Waiver of Parts 2 and 90 of the Commission's Rules to Permit New York Metropolitan Area Public Safety Agencies to Use Frequencies at 482-488 MHz on a Conditional Basis*, 10 FCC Rcd 4466 (1995) (*Order*).

Order, the Commission found that the public safety agencies in New York had "an urgent and immediate need for additional spectrum capacity for public safety communications."[3] The Commission believed that the use of TV Channel 16 would provide necessary relief and would allow for the development of interoperability of communications between the affected public safety agencies.[4] Finally, the Commission concluded that the spectrum relief could be concluded without affecting then-existing television operations or plans for the implementation of advanced television.[5]

3. In support of their request, Petitioners state that the use of TV Channel 16 plays a critical role in the ability of the NYPD and other NYMAC agencies to engage in effective public safety communications.[6] They also state that they have made enormous investments in planning, constructing and implementing a wireless infrastructure for voice and data which is integral to their ability to provide enhanced emergency response.[7] According to the Petition, the NYPD alone has invested over $50 million in the infrastructure for its operations on TV Channel 16, including transmitters, antennas, repeaters and approximately 25,000 portable and mobile radios. The Petitioners state that the New York City Fire Department, Corrections Department, Sanitation Department, Department of Information and Technology, Department of Parks and Recreation, and the Health and Hospitals Corporation Police all depend on TV Channel 16 as the core of their wireless communications capability. The Petition discusses how public safety agencies in Suffolk County, New York and Nassau County, New York also rely on TV Channel 16. According to the Petition, these entities, as well as the New York Transit Authority and other area public safety agencies, have invested millions of dollars in equipment to utilize TV Channel 16.

4. The Petitioners contend that the substantial investments made by the various public safety agencies in the use of TV Channel 16 could be jeopardized if a party petitioned the Commission to assign TV Channel 16 for digital television (DTV) use in the Hudson River Valley.[8] Petitioners also express concerns regarding the potential for interference from low power television operation.[9] In order to forestall these types of threats, the Petitioners seek to have TV Channel 16 in the New York City metropolitan area permanently allocated as part of the land mobile service for use as a public safety communications band.

II. DISCUSSION

A. Public Safety Agencies Access to Spectrum in the New York Metropolitan Area

5. The terrorist acts of September 11, 2001, illustrated the need for public safety personnel to have reliable access to sufficient telecommunications capacity during times of crisis. Telecommunications systems were essential to notify first responders and medical personnel of the tragic events that had occurred, and were occurring, and of the immediate need for their services. In the New York City metropolitan area, Channel 16 has formed an integral part of the emergency agencies' telecommunications system since the Commission's temporary authorization for its use in 1995 and is a key element in their plans for the future.

[3] *Id*. at 4468.

[4] *Id*.

[5] *Id*.

[6] Report at 2.

[7] *Id*. at 2-3.

[8] *Id.* at 5.

[9] *Id.*

B. Section 303 Authority

6. The frequencies at issue in this case - - 482-488 MHz - - are currently allocated for the broadcast television service in the Table of Frequency Allocations in Section 2.106 of our rules. Petitioners state that their request is consistent with Section 337(c) of the Communications Act of 1934, as amended, a provision that directs the Commission to "waive any requirement of this Act or its regulations implementing this Act (other than its regulations regarding harmful interference) to the extent necessary to permit the use of unassigned frequencies for the provision of public safety services" when certain specified conditions are met. The arguments made by petitioners, however, imply that what petitioners are really seeking is a permanent reallocation of television channel 16 in New York City to public safety use rather than a Section 337 waiver. While proceeding via Section 337 would afford the named petitioners a permanent waiver of applicable rules if all relevant criteria are met, the spectrum would remain allocated to broadcast television. If we were to instead proceed via Section 303 of the Communications Act, the spectrum could be permanently reallocated to fill the needs of all qualified public safety entities in New York City and the broadcast allocation would be eliminated.

7. We tentatively conclude that permanent reallocation of Channel 16 pursuant to Section 303 to the land mobile service for use with public safety communications would serve the public interest. As we originally found in 1995, public safety agencies in the New York City metropolitan area continue to have an urgent and immediate need for additional spectrum capacity for public safety communications.[10] The Petitioners contend that there is no other spectrum available to them within those bands that have been designated for public safety use. In support of this contention, the Petitioners include a frequency analysis (Frequency Analysis) of the technical parameters facing public safety entities in the New York City metropolitan area. We believe that the Petitioners' analysis demonstrates that the only unassigned spectrum in the 150-160 MHz band is not usable due to the close proximity of existing adjacent channels. In the Frequency Analysis, the Petitioners state that there are no frequencies available in either the 450-454 MHz band or the 460-465 MHz band that would satisfy the needs of the agencies. The Frequency Analysis also discusses the UHF T-Band pools (in Channels 14 and 15) and determines that all of the 25 kHz channels and most of the 12.5 kHz channels are assigned. The Petitioners demonstrate that the 12.5 kHz channels that are unassigned are unusable due to adjacent channel spacing. Likewise, they assert that the 6.25 kHz channels in that band are not usable due to the closeness of the adjacent channels. The Petitioners also state that all of the channels in the 806-821, 821-824, 851-866, and 866-869 MHz band are in use. Finally, the Petitioners explain that immediate and future uses of the new Public Safety Band at 764-776/794-806 are prohibited in the New York City metropolitan area by current television station operations. We seek comment on our tentative conclusion and the Petitioners' assertions about public safety access to spectrum in the New York metropolitan area.

8. Further, we tentatively conclude that use of Channel 16 on a permanent basis will provide immediate and necessary relief to the agencies and will allow for the continued development of interoperability in the New York metropolitan area. The Petitioners point to the long-standing use of the spectrum without harm to other users, including broadcasters, and other public safety users. The Petitioners contend that the tremendous financial investment of the various agencies and the serious public safety concerns of the New York City metropolitan area present a compelling public interest argument for the permanent allocation of TV Channel 16 for public safety services in the New York metropolitan area. We agree and we seek comment on the Petitioners' conclusions.

9. Finally, as further discussed below, we tentatively conclude that permanent reallocation of Channel 16 can be accomplished without adversely affecting existing television operations or our plans for implementation of digital television. We seek comment on these tentative conclusions. The

[10] *Order*, 10 FCC Rcd at 4468.

Petitioners provide an engineering analysis as to why the requested use will not cause harmful interference to other spectrum users who are entitled to protection. As discussed above, the NYPD and NYMAC have been using the requested spectrum pursuant to Commission authorization since 1995. When the land mobile service on Channel 16 in New York City was created, limitations were imposed to facilitate coexistence with existing licensees. For example, to accommodate WNEP-TV, Channel 16, Scranton, Pennsylvania and WPHL-TV, Channel 17, Philadelphia, Pennsylvania, limitations were placed on the effective radiated power (ERP) of base and mobile units in Bergen County New Jersey that were more stringent than those placed on systems east of the Hudson River and Kill Van Kull. Those limitations effectively preclude use of Channel 16 west of the Hudson River, and the Petitioners do not seek to have those limitations lifted. Petitioners contend that the existing service limitations resulted in successful coexistence with incumbent licensees and should be continued. In addition, the Petitioners and the licensee of Channel 17, WEBR-CA, New York City, New York[11] are parties to an agreement that coordinates interference between them. The Petitioners state that they seek to preserve the *status quo* in their relationship with WEBR-CA.[12] On these bases, we agree with the Petitioners that the use of Channel 16 for public safety services has a history of coexistence with the users of co-channel and adjacent channel spectrum.

10. In addition, the Frequency Analysis states that Station WQEX(TV), Pittsburgh, Pennsylvania meets the co-channel separation requirement, but that Station WNEP-TV, Scranton, Pennsylvania and W16AX, Ithaca, New York do not. However, as the Petitioners state, the effects of the Hudson River, discussed above, and the limitations imposed on the land mobile use of Channel 16 in the 1995 *Order* (which we propose to maintain) will continue to prevent co-channel interference with the Scranton and Ithaca television stations' channels.

11. The Petitioners also allege that uncertainty exists as to whether Class A, LPTV and TV Translator stations must protect land mobile stations operating on Channel 16 in New York, New York. For example, the Petitioners assert that Section 73.6020 of the rules specifically states that Class A TV stations must not cause interference to land mobile operations on Channel 16 in New York City.[13] The Petitioners maintain that the rule does not specifically refer to low power TV (LPTV) stations, TV translators and TV booster stations. They question whether such facilities must also provide the same protection.[14] We seek comment on this issue as well as on the basis for the Petitioners' contentions that grant of the requested relief will not cause harmful interference to those spectrum users entitled to protection.

C. Section 337(c) Criteria

12. As an alternative to reallocating the frequencies in question, we seek comment on whether we should permit Petitioners to use the frequencies pursuant to a Section 337(c) waiver. We tentatively conclude that we can make the requested reallocation pursuant to our authority in Section 303 of the Communications Act and we also believe that licensing of Channel 16 in New York City to the NYMAC

[11] On August 21, 2000, the Commission granted the application by the licensee of WEBR-LP to convert its status to Class A, at which time its call letters were changed to WEBR-CA. File No. BLTTA-20020707ADX.

[12] *See Establishment of Class A Television Service*, 15 FCC Rcd 6355, 6390 (2000).

[13] 47 C.F.R. § 73.6020. ("An application to change the facilities of an existing Class A TV station will not be accepted if it fails to protect stations in the land mobile radio service pursuant to the requirements specified in §74.709 of this chapter. In addition to the protection requirements specified in §74.709(a) of this chapter, Class A TV stations must not cause interference to land mobile stations operating on Channel 16 in New York, NY.")

[14] Our rules do require LPTV and TV translator stations to protect existing land mobile uses. 47 C.F.R. § 74.703(e). ("Low power TV and TV translator stations are being authorized on a secondary basis to existing land mobile uses and must correct whatever interference they cause to land mobile stations or cease operations.")

for public safety communications is consistent with Section 337(c). Under that Section, the Commission shall grant an application to reallocate unassigned frequencies to the public safety services if it finds: (1) no other spectrum allocated for public safety uses is immediately available; (2) there will be no harmful interference to other spectrum users entitled to protection; (3) public safety use of the spectrum is consistent with other public safety spectrum allocations in the geographic area in question; (4) the unassigned frequencies were allocated for their present use not less than two years prior to the grant of the application at issue; and (5) the grant of the application is consistent with the public interest. The statute defines public safety services as those services that are provided by the government or by an entity that has been authorized by the government and whose sole or principal purpose is to protect life, health, or property on a non-commercial basis. [15] The NYPD and NYMAC meet the definition of public safety services.

13. It appears that Petitioners have satisfied the first two criteria: (1) that no other spectrum allocated for public safety uses is immediately available and (2) that there will be no harmful interference to other spectrum users entitled to protection. As discussed above, the Frequency Analysis contains a thorough review of these issues and we tentatively conclude that it demonstrates that Petitioners have satisfied both criteria. We seek comment on our conclusions.

14. On the third criterion, that public safety use of the spectrum is consistent with other public safety spectrum allocations in the geographic area in question, the Petitioners point to the long-standing use of the spectrum without harm to other users, including broadcasters and other public safety users. We tentatively conclude that the Petitioners have satisfied this criterion and we seek comment on the Petitioners' assertions.

15. On the fourth criterion, that the unassigned frequencies were allocated for their present use not less than two years prior to the grant of the application at issue, the Petitioners maintain that the current temporary access to Channel 16 under waiver was made in 1995, which they note is outside the time limitation. We believe, however, that the reason Congress included this criterion in its Section 337(c) analysis was to ensure that the frequencies for which reallocation is sought are frequencies that have genuinely been unclaimed for at least two years. In this case, the frequencies in question (482 – 488 MHz) were temporarily assigned for public safety use in 1995. At the same time, they remained available for use by digital television broadcasters. A party interested in obtaining Channel 16 for use as a new digital television station could have requested that the Commission open an auction filing window. No one has made such a request or otherwise sought to use these frequencies for digital television in the New York City area. As a result, we tentatively conclude that the Petitioners have met the test under this criterion and we seek comment on this issue.

16. Finally, the Petitioners contend that the tremendous financial investment of the various agencies and the serious public safety concerns of the New York City Metropolitan Area present a compelling public interest argument for the permanent allocation of Channel 16 for public safety services in the New York area. We agree and we seek comment on the Petitioners' conclusions.

D. Additional Technical Considerations

17. The grant of the original waiver was predicated on several engineering considerations and restrictions to ensure that public safety operations do not interfere with television broadcast operations. We propose to adopt the same measures if we grant permanent reallocation or a Section 337(c) waiver. The specific provisions we propose to adopt include the following:

[15] 47 U.S.C. § 337(f)(1).

Section 73.6020. The provision of this section, that Class A stations must not cause interference to land mobile stations operating on channel 16 in New York, NY, would be extended to cover public safety operations in the counties of Nassau and Suffolk.

Section 74.709. Land mobile station protection. The provisions of this section, that make lower power TV and TV translator stations secondary to land mobile operations in designated urban regions, would be extended to public safety land mobile operations on channel 16 in New York City and the counties of Nassau and Suffolk.

Section 90.303. In addition to the frequency assignments tabulated in this section, channel 16 (482-488 MHz) would be made available for public safety land mobile operations in New York City and Nassau and Suffolk Counties.

Section 90.305. Base station operation on channel 16 in the New York City urban region would be restricted to the five boroughs of New York City and Nassau and Suffolk Counties in New York. Operation of mobile units would be permitted exclusively in these counties and boroughs.

Section 90.307. Protection Criteria. The effective radiated power (ERP) and antenna height of public safety base stations operating on channel 16 in the New York City urban region would be governed by tables B, D, and E and Figure "B" of this section.

18. We seek comment on the proposals.

III. CONCLUSION

19. We conclude that the terrorist attacks of September 11, 2001, underscored the increasing importance of public safety radio systems, which provide the primary telecommunication service for first responders in emergency situations. In the New York metropolitan area, the use of TV Channel 16 by the NYPD and NYMAC has been an essential part of this telecommunications service since the Commission's temporary authorization in 1995. We tentatively conclude that the public interest will be served by grant of the Petitioners' proposal to change the temporary authorization to a permanent reallocation. The Petitioners contend, and we tentatively conclude, that permanent reallocation of Channel 16 would serve the public interest by facilitating these agencies' ability to make long term plans based on its availability, to expand their investment in the spectrum, and to use the spectrum to protect public safety and well-being. By reallocating Channel 16 to public safety use in the New York City area, we believe that we will be providing permanent necessary spectrum capacity to area public safety agencies while continuing to facilitate the increasingly-important interoperability of public safety communications.

IV. PROCEDURAL MATTERS

20. This matter shall be treated as a "permit –but-disclose" proceeding in accordance with the Commission's *ex parte* rules. 47 C.F.R. § 1.200, 1.1206. Members of the public are advised that *ex parte* presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed as provided under the Commission's rules. *See generally* 47 C.F.R. Sections 1.1202, 1.1203 and 1.1206(a).

21. Pursuant to 47 C.F.R. §§ 1.415, 1.419, interested parties may file comments on or before **30 days from the date of publication in the Federal Register** and reply comments on or before **45 days from the date of publication in the Federal Register**. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies. See Electronic Filing of Documents in Rulemaking Proceedings, 63 Fed. Reg. 24121 (1998).

22. Comments filed using ECFS can be sent as an electronic file via the Internet to http://www.fcc.gov/e-file/ecfs.html. Generally, only one copy of an electronic submission must be filed. If multiple docket or rulemaking numbers appear in the caption of this proceeding, however, commenters must transmit one electronic copy of the comments to each docket or rulemaking number referenced in the caption. When completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties also may submit electronic comments by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to ecfs@fcc.gov, and should include the following words in the body of the message, "get form." A sample form and directions will be sent in reply. Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, commenters must submit two additional copies for each additional docket or rulemaking number.

23. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail).

24. The Commission's contractor, Vistronix, Inc., will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, N.E., Suite 110, Washington, D.C. 20002.

-The filing hours at this location are 8:00 a.m. to 7:00 p.m.

-All hand deliveries must be held together with rubber bands or fasteners.

-Any envelopes must be disposed of before entering the building.

-Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.

-U.S. Postal Service first-class mail, Express Mail, and Priority Mail should be addressed to 445 12th Street, SW, Washington, D.C. 20554.

25. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

26. For further information on this proceeding, please contact Dave Roberts at (202) 418-1600, Video Division, Office of Broadcast License Policy, Media Bureau.

27. The Commission has determined that the relevant provisions of the Regulatory Flexibility Act of 1980 do not apply to rule making proceedings to amend the TV Table of Allotments, Section 73.606(b) of the Commission's rules. See Certification That Sections 603 and 604 of the Regulatory Flexibility Act Do Not Apply to Rule Making to Amend Sections 73.202(b), 73.504 and 73.606(b) of the Commission's Rules, 46 FR 11549, February 9, 1981.

V. ORDERING CLAUSES

28. Accordingly, **IT IS ORDERED** that pursuant to the authority contained in Sections 1, 4(i), 4(j), 301, 303, 308, 309(j), and 337 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 151, 154(j), 157(a), 301, 303, 308, 309(j), and 337 this *Notice of Proposed Rulemaking* **IS ADOPTED**.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A: Proposed Rules

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 C.F.R. part 2 as follows:

PART 2 – FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

1. The authority citation for part 2 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

2. Section 2.106, the Table of Frequency Allocations, is amended by revising footnote NG66 to read as follows.

§ 2.106 Table of Frequency Allocations.

* * * * *

NON-FEDERAL GOVERNMENT (NG) FOOTNOTES

* * * * *

NG66 The use of the land mobile service in the band 470-512 MHz is available for assignment to licensees in the Public Mobile Services, the Public Safety Radio Pool, and the Industrial/Business Radio Pool at, or in the vicinity of 11 urbanized areas, as set forth in the following table. Additionally, the band 482-488 MHz (TV channel 16) is available for assignment to licensees in the Public Safety Radio Pool at, or in the vicinity of, Los Angeles and at, or in the vicinity of, New York City and Nassau and Suffolk Counties, New York. Such use in the land mobile service is subject to the conditions set forth in 47 C.F.R. parts 22 and 90.

Urbanized area	Frequencies (MHz)	TV channel
New York, NY-Northeastern New Jersey….	470-482…….	14, 15
Chicago, IL-Northwestern Indiana……	470-482…….	14, 15
Boston, MA……...……	470-476 and 482-488…	14, 16
Pittsburgh, PA……	470-476 and 494-500…	14, 18
Los Angeles, CA……	470-476 and 506-512…	14, 20
Miami, FL…….	470-476…….	14
San Francisco-Oakland, CA……..	482-494…….	16, 17
Dallas, TX……..	482-488…….	16
Washington, D.C.-Maryland-Virginia……...	488-500…….	17, 18
Houston, TX……..	488-494…….	17
Philadelphia, PA-New Jersey……	500-512…….	19, 20

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APPENDIX B: Report of the Police Department of the City of New York

REPORT OF THE POLICE DEPARTMENT OF THE CITY OF NEW YORK

THE NEED TO ALLOCATE CHANNEL 16 IN THE NEW YORK METROPOLITAN AREA TO THE LAND MOBILE SERVICE FOR PUBLIC SAFETY COMMUNICATIONS ON A PERMANENT BASIS

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REPORT OF THE POLICE DEPARTMENT OF THE CITY OF NEW YORK

THE NEED TO ALLOCATE CHANNEL 16 IN THE NEW YORK METROPOLITAN AREA TO THE LAND MOBILE SERVICE FOR PUBLIC SAFETY COMMUNICATIONS ON A PERMANENT BASIS

The Police Department of the City of New York for itself and the other public safety agencies comprising the New York Metropolitan Advisory Committee (NYMAC),[16] submits this report to demonstrate the need for broadcast channel 16 in the New York Metropolitan area to be allocated by the Federal Communications Commission as a permanent part of the land mobile service for public safety communications. The critical role channel 16 has in providing public safety communications by the New York City Police Department and other NYMAC agencies, the extensive investment already made in support of these operations and the need to make substantial additional investment, demonstrates that the temporary character of present authority be made permanent.

BACKGROUND

On March 17, 1995, the Federal Communications Commission (Commission or FCC) released its Order waiving Parts 2 and 90 of its rules to permit the temporary assignment of frequencies in the 482-488 MHz band, broadcast channel 16, to public safety agencies in the New York City Metropolitan area. The Order stated that use of these frequencies will be permitted for a period of at least five years or until the Commission assigns channel 16 for advanced television service.[17]

In the 1995 Authorization, the Commission responded to the severe spectrum overcrowding that plagues the New York Metropolitan area. The Commission recognized that the overloading of public safety channels exceeded the Commission's own rules and the peril presented to public safety. The Commission noted that consistent delays and backlogs were taking place in even the most critical radio transmissions. Importantly, the Commission determined that not only was there an urgent and immediate need for additional spectrum

[16] In addition to the New York City Police Department, NYMAC public safety agencies encompass the New York City Department of Information and Technology, the New York City Fire Department, the New York City Department. of Corrections, the New York City Department of Transportation, the New York City Department of Parks & Recreation, , the New York City Health & Hospital Police, the New York City Department of Sanitation, the New York City Transit Authority, the Bergen County, New Jersey Police Department, the Elmont Fire District, the Yonkers Fire Department, the Nassau County Police Department and the Suffolk County Police Department.

[17] *In the Matter of the Waiver of Parts 2 and 90 of the Commission's Rules to Permit the New York Metropolitan Area Public Safety Agencies to Use Frequencies at 482-488 MHz on a Conditional Basis*, FCC 95-115, 10 FCC Rcd 4466 (March 17, 1995).

capacity for public safety agencies in the New York metropolitan area but that granting the authorization would be accomplished without affecting existing broadcast television operations or its plans for digital television.

Since the temporary authorization in 1995, the New York City Police Department and NYMAC agencies have made enormous investment in planning, constructing and implementing a wireless infrastructure for voice and data integral to providing enhanced emergency response to citizens in need. Existing broadcast operations have not been affected adversely by these public safety operations. The channel 16 frequencies and the investment and expertise committed by the Police Department and NYMAC agencies have resulted in tangible improvements in public safety response capability.

The substantial improvements in public safety communications in the New York Metropolitan area that flowed from the Commission's 1995 decision give broad credence to the need to make the authorization permanent and designate channel 16 as part of the land mobile service. The September 11, 2001 attack has presented enormous additional challenges to public safety communications. The substantial additional investment to be made, the lack of any alternative spectrum, and the ability of channel 16 communications to operate without affecting broadcast operations in the area, demonstrates the need to assign permanently channel 16 to public safety land mobile operations in the New York Metropolitan area. The New York City Police Department commends the Commission's contribution to public safety communications in New York City and urges that it act expeditiously and favorably in making channel 16 permanent.

INVESTMENT IN AND OPERATIONS OF CHANNNEL 16

New York City

The New York City Police Department, the Nation's largest police agency, has invested in excess of $50 million in the infrastructure encompassing its operations on channel 16. This extensive capital investment includes transmitters, antennas, repeaters, and approximately 25,000 portable and mobile radios and other equipment that ensures that the Police Department have a robust wireless network throughout New York City. The investment and time committed to design, construction and implementation of this infrastructure has been an enormous undertaking intended to increase substantially the efficiency and effectiveness of the Department's wireless communications capability and how it responds to citizens confronting emergencies. The result has demonstrated a significant enhancement to New York City's almost 40,000 police officers in being able to respond to the over 8 million residents of the City as well as the million of visitors and commuters that travel to the city each day. The infrastructure is the foundation of continuing investment to bring more real time information to officers responding to emergencies relating to locations and individuals encountered through modernizing computer aided dispatch systems. These enhancements are a critical element in improving homeland security as channel 16 is fundamental to emergency responsiveness.

In addition, to the Police Department, channel 16 in an important communications facility for the New York City Fire Department, Department of Information and Technology, the Corrections Department, the Department of Parks and Recreation, the Department of

Transportation, the Sanitation Department, and the Health and Hospitals Corporation Police. Each of these agencies depends upon channel 16 to provide core wireless communications capability in carrying out their public safety responsibilities; there are 20,000 portable and mobile units beyond those of the Police Department. Channel 16 is at the foundation of the New York City Fire Department's effort to improve its wireless communications capability. These efforts are a major priority to ensure that firefighters have effective and efficient means to communicate when responding to an emergency. The need for channel 16 to provide quality spectrum to meet this goal is crucial to the bringing forth these improvements.

Suffolk County

Suffolk County encompasses 1000 square miles of the eastern two-thirds of Long Island, extending 120 miles into the Atlantic Ocean, East from New York City. The distance from the Nassau County border to Montauk Point is 86 miles. At Suffolk County's widest point the distance from Long Island Sound to the southern shore is 26 miles. In carrying out its responsibilities, the Suffolk County Police Department has over 3,200 sworn and civilian members serving over 1.4 million citizens. The Department covers over 430 miles of coastline and open water. It responds to over one million calls for service per year and is the 14th largest Police Department in the country.

Suffolk County has committed substantial investment to public safety communications since channel 16 were assigned by the Commission in 1995. The critical role the infrastructure has in modernizing the Police Department's Communications system cannot be overstated. The commitment made by the Commission to public safety communications in the New York Metropolitan area was followed by support from other federal agencies. Specifically, the Suffolk County Police Department has received a $15-million grant under the COPS MORE program, which was matched by $5 million in County funds. The funding provided for Mobile Data Computers (MDC's) in all of the Department's marked police units and many unmarked units**,** LIVE SCAN Fingerprinting and Photo Imaging for investigative units, and state-of-the-art integrated records management system tied to the Computer Aided Dispatch system**.** The 1995 Authorization and subsequent grant monies have resulted in tremendous productivity savings enabling the Department's officers to spend significantly less time on paperwork and more time performing police duties. It is these capabilities that the Commission has embraced as bringing technology to benefit the public.[18] Channel 16 is relied upon to provide effective quality voice and data communications to police officers in the field.

[18] *In the Matter of the Development of Operational Technical and Spectrum Requirements for Meeting Federal, State, and Local Public Safety Agency Communication Requirements through the Year 2010*, First Report and Order and Third Notice of Proposed Rulemaking, WT Docket 96-98, 14 FCC Rcd 152, 154 (1998), citing the *Final Report of the Public Safety Wireless Advisory Committee to the Federal Communications Commission*, September 11, 1995 at 5.

Nassau County

Nassau County, located on Long Island and near the center of the New York metropolitan area, borders New York City to the west, Suffolk County to the east, and covers over 285 square miles. The Nassau County Police Department, with almost 3,000 officers and 1200 civilian personnel, is also one of the largest in the country, providing law enforcement and emergency medical services throughout the county. The Department has more than 200 marked patrol units operating from eight precincts located throughout the county. Five channels on channel 16 are used for crucial mobile data communications.

In addition to the New York City, Suffolk and Nassau Police Departments, the Elmont Fire District, the Yonkers Fire Department and the New York City Transit Authority have committed substantial monies to infrastructure investment to support the channel 16 frequencies that they have been assigned. Moreover, the several New York City agencies use channel 16 for mobile and portable wireless communications.

CHANNEL 16's PUBLIC SAFETY COMMUNICATIONS IS CHALLENGED BY OTHERS USERS OF THE SPECTRUM

Attached hereto is an analysis of the technical parameters facing public safety communications in the New York Metropolitan area in the use of channel 16 and the need for placing channel 16 permanent in the land mobile service. As the analysis makes clear, the New York City Police Department and NYMAC agencies face a threat to public safety communications unless channel 16 is allocated formally to the land mobile service. [19]

Despite the critical role channel 16 has in public safety communications and the enormous investment made by the New York City Police Department and NYMAC agencies, interests could petition the Commission to assign a channel 16 to DTV in the Hudson River Valley. The Police Department seeks to foreclose this potential and the costs relating to opposing such an effort. The technical analysis shows that a petition to establish a DTV station in the proximity of the New York metropolitan area where it will adversely affect channel 16 operations is not foreclosed by the Commission's rules and policies. As neither the Commission's allocation tables nor rules refer to channel 16 use as a public safety communications band, prospective stations have limited notice of the need to protect channel 16.

Moreover, the transition to digital television, with full power stations moving to different spectrum, and in many circumstances causing low power television licensees to seek new spectrum, has caused a continued threat to channel 16 communications. These
low power TV, TV translator and TV booster stations present substantial challenge. The Commission's rules do not specifically protect channel 16 public safety communications with regard to full power, low power, translator and booster stations. It is only in the rules addressing Class A TV stations where channel 16 communications are protected. Section 73.6020 of the Commission's rules states that Class A TV stations must not cause interference to land mobile stations operation on channel 16 in New York, New York. The technical analysis addresses why

[19] See Report of the Vogel Consulting Group, Inc., *Frequency Analysis in Support of the Permanent Reallocation of TV Channel 16 to the New York Metropolitan Area for Public Safety Applications*, November 2002.

the Commission should designate clearly that channel 16 is part of the land mobile service, so that all present and future broadcasters are on full notice of the need to protect channel 16 operations.

Committing Channel 16 to Public Safety Land Mobile Communications is Consistent with the Standards of Section 337(c) of the Communications Act of 1934, as amended, that Makes Spectrum Available to Public Safety Agencies

Section 337(c) of the Communications Act states that the Commission shall grant an application by an entity seeking to provide public safety services to the extent necessary to permit the use of unassigned frequencies, if the Commission makes five specific findings. These findings are: (1*)* no other spectrum allocated for public safety use is immediately available; *(2*) there will be no harmful interference to other spectrum users entitled to protection; (3) public safety use of the frequencies is consistent with other public safety spectrum allocations in the geographic area in question; (4) the unassigned frequencies were allocated for their present use not less than two years prior to the grant of the application at issue; and (5) the grant of the application is consistent with the public interest.[20] The need of the New York City Police Department and the NYMAC to make channel 16 permanent part of land mobile communications satisfies all criteria of the law as well as the Commission's requirements. The following summarizes how channel 16's circumstances fulfill the criteria of Section 337(c) and the Commission's rules:

No other spectrum allocated for public safety services is immediately available to satisfy the requested public safety service use.

As set forth in detail in the attached technical analysis of the Vogel Consulting Group, Inc., it is clear that there is no spectrum available from pools allocated to public safety agencies. Specifically, in the 150-160 MHz band, the analysis revealed no available frequencies that meet the requirements of the Police Department and NYMAC agencies. In the 450-466 MHz and 470 to 480 MHz bands, the search shows that while there are available 6.25 kHz frequencies they fall far short of the need, and that no manufacturer provides equipment for this narrow bandwidth.[21] With regard to 806-821/851-866 MHz, all channels are assigned; there are no land mobile channels available in this band. A survey of the National Public Safety Planning Advisory Committee (NPSPAC) shows no wide area channels are available in the New York metropolitan area to meet agency requirements.[22] In the new Public Safety Band at 764-776 / 794-806, immediate and future use of this band is prohibited by current TV stations licensed and in operation.

[20] **"**Public safety services" are defined by 47 U.S.C. § 337(f) as services the sole or principal purpose of which is to protect the safety of life, health, or property, that are provided by the governmental entities or by non-governmental entities authorized by the governmental entity whose primary mission is the provision of such services, and that are not made commercially available to the public by the provider.

[21] *See* Letter of the New York Metro Advisory Committee, dated November 21, 2002, attached to the technical analysis.

[22] *See* Letter of the Tri-State Radio Planning Committee, Regional Planning Update Committee, Region 8, dated November 21, 2002.

In summary, there are no frequencies in the VHF, UHF, or 800 MHZ bands that provide clear usable frequencies to meet NYPD and NYMAC requirements.

The requested use is technically feasible without causing harmful interference to other spectrum users entitled to protection from such interference under the Commission's regulations.

Until 1995, this frequency band, 482-488 MHz, was designated as a Television Broadcasting Stations, channel 16. In the New York Metropolitan area, there is no NTSC station assigned to channels 14 or 15. The New York City Police Department proposes that channel 16 be designated permanently as part of the land mobile public safety service in the New York Metropolitan area. As the technical analysis details, the New York City Police Department's proposal comports with land mobile policies. The proposal will cause no interference with entities authorized to operate on adjacent frequency bands in the New York Metropolitan area.

Channel 14, 15 and 16 and 17 TV stations in the states of New Jersey, New York, Pennsylvania and Connecticut were investigated and are detailed in the technical report.

The technical analysis addresses several circumstances regarding the effective operation of channel 16 in the land mobile service in the New York Metropolitan area. Included in the technical report is a discussion addressing the proposed low power television station on channel 16 in Hartford, Connecticut, potential broadcast operations in the Hudson River Valley, adjacent operations of low power television station WEBR, channel 17 and the pending operations of W17CR in Plainview, New York on Long Island.

A petition is pending at the Commission for placement of a low power television station in Hartford, Connecticut. As demonstrated by the technical analysis, the proposed station's operations will severely disrupt ongoing public safety communications of the Suffolk County Police Department. The applicant's response, that the concerns of the Suffolk County Police Department, the Nassau County Police Department, and the New York City Police Department are "disingenuous" is a major premise of this request that channel 16 be formally designated as part of the public safety land mobile service, entitled to the accompanying protections.[23] The Commission has made clear that low power television stations, much less applicants for such stations, accrue no rights or benefits, and cannot prevail over significant public interests such as public safety communications.[24]

With regard to proposed broadcast operations in the Hudson River Valley, the technical analysis sets forth the parameters of concern to public safety operations on channel 16. The Department seeks to avoid a continuing examination of potential applicants seeking broadcast operations that may not comprehend the significance of channel 16 public safety communications. Formally designating channel 16 in the land mobile service for public safety will address this circumstance.

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[23] *Response of Communications Site Management, LLC*, dated July 17, 2001 at page 3, LPTV Displacement Application, No. BPTVL-19980601QZ.

[24] *In re Petition of Community Broadcasters Association*, 59 Rad. Reg. 2d 1216, 1217, para 4 (1986).

WEBR is a low power television station operating on adjacent channel 17 and transmitting from the Empire State Building to the Queens, New York area. The NYPD and NYMAC agencies have a memorandum of understanding with WEBR that seeks to ensure that channel 17 can serve its community while protecting critical public safety communications. This report and request seeks to bring clarity to WEBR's operations and the public safety communications on channel 16. Significantly, there is a difference between the Commission's record as to what parameters WEBR is authorized to operate under and its actual operations. Specifically, the ERP and other technical details obtained from WEBR-CA's engineering consultant are contrary to technical information obtained from the FCC's public access web site and the license issued to WEBR-CA. The FCC shows the ERP to be 2.0 kW, not 1.07kW, and the polarization to be horizontal. Additionally, the horizontal antenna pattern is different as is the antenna model number. The build out of additional infrastructure, and use by NYMAC agencies engages the parameters of WEBR's present and future operations.

The technical report also addresses W17CR channel 17, and its likelihood to probably produce interference to the nearby public safety base stations sited. The interference from the recently issued construction permit to W17CR, if implemented, will show to have the potential to reduce the area of coverage for public safety communications on channel 16.

The technical analysis concludes that allocating channel 16 to the land mobile service for public safety communications is technically feasible and will not interfere with those authorized users that are entitled to protection on channel frequencies and adjacent spectrum. There should be no interference to the reception of the intended signals for any of the authorized receivers at the sites of adjacent users.

the use of the unassigned frequency for the provision of public safety services is consistent with other allocations for the provision of such services in the geographic area for which the application is made

Channel 16 is in a frequency band where land mobile operations have been authorized. Experience has demonstrated the effective use of these channels by public safety agencies without harm to other users. The frequency band has been used by the public safety agencies in the New York Metropolitan area for over five years. The Commission's assignment of channel 16 to the land mobile service is consistent with its 1995 decision and the positive experience that has followed.

the unassigned frequency was allocated for its present purpose not less than 2 years prior to the date on which the application is granted

The assignment of channel 16 frequencies to public safety communications commenced in 1995. The criteria's intent of protecting new services is not undermined, thereby meeting the third criteria.

g*ranting such application is consistent with the public interest*

The New York City Police Department and NYMAC agencies continue to face critical requirements to modernize public safety communications systems. Each agency must also protect the investment already made in channel 16, but more importantly respond to the

enormous challenges of the September 11, 2001 attack. The health and safety of the public and New York City police officers, and those of the NYMAC agencies, is at stake. The Commission has a crucial role and can make a further tangible contribution to the safety and well being of public safety officers and the public they are sworn to protect. The public interest is clearly forwarded by the Commission's swift and favorable action to allocate channel 16 to the land mobile service in the New York Metropolitan area.

CONCLUSION

Section 1 of the Communications Act of 1934, as amended, states that the Commission's responsibility to regulate the broadcast spectrum is grounded on ensuring the "national defense …and promoting the safety of life and property." The Commission's important action in 1995 upholds this fundamental. Since the Commission's 1995 decision to assign temporarily channel 16 to public safety communications in the New York Metropolitan area it has become a critical backbone to the communications infrastructure of the Police Department of the City of New York and NYMAC agencies. As public safety agencies face enormous challenges emanating from the September 11, 2001 attack, channel 16 frequencies are crucial to meeting this challenge. The Commission's expeditious and favorable action in allocating channel 16 in the New York Metropolitan area to public safety land mobile communications is a critical priority of the New York City Police Department.

Respectfully submitted,

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FREQUENCY ANALYSIS

IN SUPPORT OF THE PERMANENT

REALLOCATION OF TV CHANNEL 16

TO THE NEW YORK METROPOLITAN AREA FOR

PUBLIC SAFETY WIRELESS APPLICATIONS

by

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NOVEMBER 2002
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EXECUTIVE SUMMARY

The New York City Police Department conducts critical public safety communications over channel 16. Temporarily assigned in 1995, and used by agencies in New York City, Suffolk and Nassau Counties, the Department is proposing that channel 16 be permanently assigned to public safety communications. This technical report, prepared at the request of the New York City Police Department, addresses current and future public safety communications on channel 16 and the range of users, some potential, on co and adjacent TV channels. This report concludes that channel 16 in the New York metropolitan area can and should be reallocated to the land mobile service for use by Public Safety on a permanent basis.

INTRODUCTION

Starting over a decade ago, the public safety agencies in the New York metropolitan area joined together to address the severe lack of radio spectrum for public safety communications throughout the New York area. Under the leadership of the New York City Police Department (NYPD), the members of the New York Metropolitan Advisory Committee (NYMAC), including the Police Departments in Suffolk and Nassau Counties in New York, and Bergen County in New Jersey, began an effort to obtain relief. That effort resulted in the Federal Communications Commission (FCC) Temporarily assigning to the NYMAC agencies 6 MHz. of spectrum in 1995 that was previously assigned to television broadcast. The FCC assignment was for a period of five years or until channel 16, the assigned channel, was used for *digital television* (DTV)[25] service.

The NYMAC agencies expended significant effort to obtain this spectrum for public safety communications. Since the assignment the NYMAC members have also made substantial investments in the infrastructure and ancillary communications equipment; the NYPD in particular has spent significant sums.

Vogel Consulting Group has undertaken a search at their behest to determine if it is possible to obtain the necessary channels from existing spectrum. We find that all of the standard Public Safety VHF, UHF and 800 MHz channels are already in use in the New York City metropolitan area.

The continued use of channel 16 is dependent on no DTV station being assigned the spectrum in the metropolitan area, as well as it not being assigned to other interests seeking use of the spectrum for other broadcast uses. Therefore, we are proposing that all of TV channel 16 be reallocated for use by Public Safety agencies in the New York City metropolitan area. And, we find that this can be undertaken without causing additional harmful interference to geographically adjacent TV channels.

With the destruction of the World Trade Center towers on September, 2001, it is evident that there are individuals who will use any means at their disposal to disrupt and destroy life and property in the United States of America. It is one of the tasks of the Public safety community in the New York City area to keep them from further attaining their goals. The means by which communications is maintained is a critical resource used to that end, and there is information in this report that would put this resource at risk. Therefore there is critical information that is blacked out in the copies that are available to the general public. If there is a need to know such portions of the report they are available from the NYPD or FCC by demonstrating such need.

The engineering database used in this application is the best available listing of FCC TV facilities technical data that could be obtained as of this date. In the event there are errors that are found within this application because the FCC database that has

[25] Originally this was called the *advanced television (ATV) service*, but the name was changed over time to *digital television* (DTV) service.

been made available to industry is incomplete or otherwise inaccurate, we request that we be given an opportunity to submit an amendment without prejudice to correct such errors.

AVAILABILITY OF PUBLIC SAFETY SPECTRUM

Vogel Consulting Group, Inc. has conducted an extensive search of all existing land mobile bands applicable for use by Public Safety in the New York City metropolitan area. The results of the search are contained in APPENDIX A. In addition, we contacted the Southern NY State Frequency advisor for APCO and requested their assistance. See the attached letter in APPENDIX B indicating that there are no channels available. The results of our search are as follows:

VHF

Any frequency found available in our search was checked against the adjacent 15 kHz channel for the necessary separation to prevent interference and disruption to public safety communications. Only the new 7.5 kHz channels were found to be available and they were eliminated due to the close proximity of the existing adjacent channels. It is not possible to use this band to supply the requirement.

UHF

Data for the UHF band is broken down into two sections and combined with the report in APPENDIX A. The first section covers the 450 to 454 MHz band (base transmit frequencies), the second section covers the 460 to 465 MHz band (also base transmit frequencies). The analysis shows that there are no frequencies that are available in this band to satisfy the need.

UHF T-BAND

The two T-Band pools (channel 14 – 470.3125 to 472.9875 MHz base transmit frequencies and channel 15 – 476.3125 to 478.99875 MHz base transmit frequencies) show all 25 kHz channels and most 12.5 kHz channels are assigned. There are a number of 12.5 kHz channels available, but they cannot be used due to the adjacent channel spacing. All 6.25 kHz channels are available, but again they cannot meet the requirements due to the closeness of the adjacent channels.

806-821/851-866

The report for the 800 MHz. Public Safety Pool shows all channels are assigned.

821-824/866-869

The New York metropolitan area is located within the boundaries of Region 8. The City of New York and members of the New York City Metropolitan Advisory Committee have been active participants in the regional planning process from its inception. Members early on applied for and received channels to construct 800 MHz Public Safety/ Service trunked systems. They have added additional channels to expand their systems where possible. However, these systems are now fully loaded, and no additional channels are available for expansion. (see letter from Regional Chairperson to County).

764-776 / 794-806 New Public Safety Band

This band is in the process of being established by the Commission. Its immediate use in the New York City metropolitan area is prohibited by the analog TV stations in TABLE 1 that are currently in operation:

TABLE 1
TV Stations that block the use of the 700 MHz band in New York City

Channel#	City	Co/adj	Distance to NYC
63	Newton, NJ	co	36 miles
64	Philadelphia, PA	co	81 miles
67	Smithtown	adj	55 miles
68	Newark, NJ	co	0.5 miles
69	Allentown, PA	co	77 miles

In the Fifth Report and Order[26] the Commission set "a target of 2006 for the cessation of analog service". That was subsequently modified to allow delay until "2006 or the date by which 85% of the television households in a licensee's market are capable of receiving the signals of digital broadcast stations, whichever is later."[27] Recently the Commission ordered that digital tuners shall be installed in all new television sets by the year 2008. There is delay from when the sets are available for purchase, and the average set in the US lasts over 10 years. So, it is highly unlikely there will be channels available for land mobile use in this band until well past 2006.

With the reassignment of channel 16 for Land Mobile Public Safety use on a permanent basis in the New York Metro area, safeguards will be required to eliminate further increases in interference. Co-channel or adjacent channel TV stations should not be granted construction permits or increases in power in and around the metropolitan New York area. These safeguards will maintain the status quo so that interference levels do not further degrade Public Safety communications.

The current situation is one in which the public safety use of channel 16 is exposed to the construction of a TV station on channel 16 north of New York City. This can be within a distance that would cause serious harm to the existing channel 16 Public Safety use by the NYPD. A similar situation impacting other NYMAC Public Safety members

[26] *Fifth Report and Order* In the Matter of Advanced Television Systems and Their Impact upon the Existing Television Broadcast in MM Docket No. 87-268, 12 FCC Rcd 12809 (1997), paragraph 99.

[27] Required by Congressional Mandate in the Communications Act of 1934, as amended in section 309(j)(14) of the 1997 Budget Reconciliation Act.

involves W11BJ, in the Hartford Conn. Area. Both of these situations are addressed in the following report.

CAN A DTV CHANNEL 16 BE PLACED NEAR NEW YORK CITY?

The purpose of this section is to examine the potential for a broadcast station to be placed north of New York City, in an area generally known as the Hudson River Valley, as shown in Figure 1. Since channel 16 in the New York metropolitan area is not allocated to the land mobile service, the DTV rules and those applicable to Class A and low power television will be used in order to examine this issue. The parameters of channel 16 land mobile operations in the New York metropolitan area are not delineated. Hence this note concludes that the potential for an application placing a broadcast station in the Hudson River Valley is tangible. This creates a significant challenge to NYPD and NYMAC public safety communications that would not be present if channel 16 land mobile operations were clearly noted in the Commission's rules.

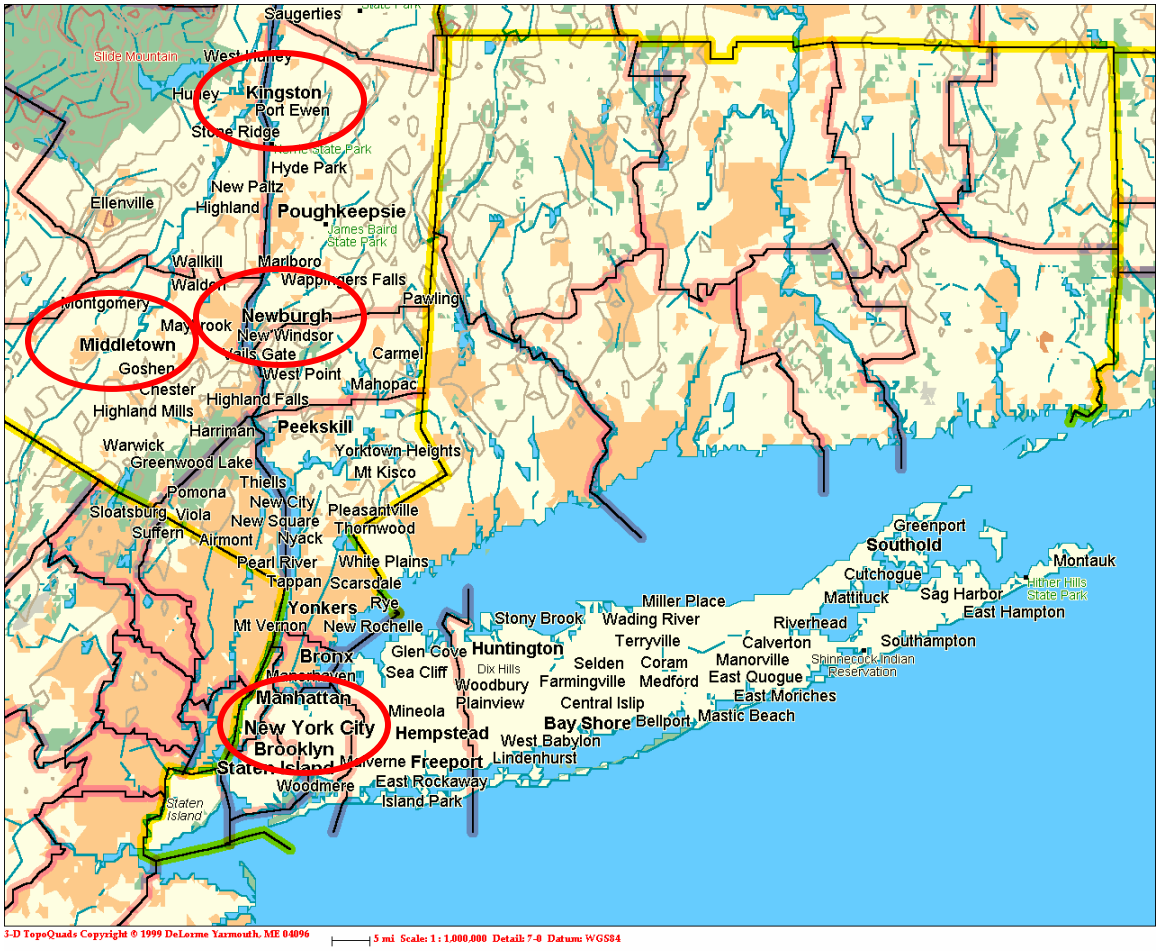


Figure 1 Map of the New York City area showing Middletown, Newburgh, and Kingston, New York

The first matter to be examined is what FCC rules must be met to show that interference is (or is not) possible to land mobile radio systems in New York City from a DTV allocation placing a channel 16 station in the area of Kingston, Newburgh, or Middletown, New York. The issue is whether a television station could meet all the FCC rules for compatibility with other TV stations but still cause harm to land mobile in

the New York City area. The municipalities under consideration as, shown in Figure 1, are located about 92, 64, and 59 miles from New York City respectively.

DTV RULES FOR DTV STATIONS

The FCC rules say:

> 73.622 (c) **Availability of channels.** Applications may be filed to construct DTV broadcast stations only on the channels designated in the DTV Table of Allotments set forth in paragraph (b) of this section, and only in the communities listed therein. Applications that fail to comply with this requirement, whether or not accompanied by a petition to amend the DTV Table will not be accepted for filing. However, applications specifying channels that accord with publicly announced FCC Orders changing the DTV Table of Allotments will be accepted for filing even if such applications are tendered before the effective dates of such channel changes. An application for authority to construct a DTV station on an allotment in the initial DTV table may only be filed by the licensee or permittee of the analog TV station with which that initial allotment is paired, as set forth in Appendix B of the *Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order* in MM Docket 87-268, FCC 98-24 (*Memorandum Opinion and Order*) adopted January 29, 1998.... Applications may also be filed to implement an exchange of channel allotments between two or more licensees or permittees of analog TV stations in the same community, the same market, or in adjacent markets provided, however, that the other requirements of this section and paragraph 73.623 are met with respect to each application.

This appears to say that one must already be an analog operator and have a DTV allocation to use or trade with someone else close by, or you cannot have one of the existing allocations. And in order to modify it you must go through the procedure in §73.623. The following sets forth the procedure required from:

> §73.623 **DTV applications and changes to DTV allocations**
> (a) *General*. This section contains the technical criteria for evaluating applications requesting DTV facilities that do not conform to the provisions of §73.622 and petitions for rule making to amend the DTV Table of Allotments (§73.622(b))…
>
> (c)(1) Requests filed pursuant to this paragraph must demonstrate compliance with the principal community coverage requirements of section 73.625(a).
>
> (c)(2) Requests filed pursuant to this paragraph must demonstrate that the requested change would not result in more than an additional 2 percent (sic) the population served by another station being subject to interference; provided, however, that no

> new interference may be caused to any station that already experiences interference to 10 percent or more of its population or that would result in a station receiving interference in excess of 10 percent of its population. The station population values for existing NTSC service and DTV service contained in Appendix B of the *Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order* in MM Docket 87-268, FCC 98-24 (*Memorandum Opinion and Order*) adopted January 29, 1998 referenced in §73.622©, are to be used for the purposes of determining whether a power increase or other change is permissible under this de minimis standard.

It then goes on to say that the procedure in OET Bulletin 69 for Longley-Rice point-to-point propagation is to be used and D/U values defining interference are then given for co-channell, ± adjacent-channel, and ± taboo-channel protection. They are reproduced in TABLE 2 below.

TABLE 2
DTV Into DTV D/U for "Valid" Interference

ITEM	D/U in dB
Co-Channel	
DTV into NTSC	+34
NTSC into DTV	+2
DTV into DTV	+15
First Adjacent Channel	
Lower DTV into NTSC	-14
Upper DTV into NTSC	-17
Lower NTSC into DTV	-48
Upper NTSC into DTV	-49
Lower DTV into DTV	-28
Upper DTV into DTV	-26
Other Channels (Ch 14-69 only)	
DTV into NTSC, N=NTSC, DTV=	
N-2	-24
N+2	-28
N-3	-30
N+3	-34
N-4	-34
N+4	-25
N-7	-35
N+7	-43
N-8	-32
N+8	-43
N+14	-33
N+15	-31

But, the D/U interference above is only "valid" when the S/N is 28 dB or better for DTV and 25 dB or better for NTSC stations, and it is 21 and 23 dB respectively at the 16 dB S/N noise limited

coverage boundary. The D/U tapers between the values above for DTV into DTV interference by the equation:

$$D/U = 15 - 10 * \mathrm{Log}_{10} ([1 / \{1 - 10^{-(S/N - 15.19) / 10}\}])$$

A table is given for NTSC to DTV interference, instead of an equation, and linear interpolation is required if necessary. TABLE 3 gives those values.

TABLE 3
NTSC into DTV D/U for "Valid" Interference

S/N in dB	D/U in dB
16.00	21.00
16.35	19.94
17.35	17.69
18.35	16.44
19.35	7.19
20.35	4.69
21.35	3.69
22.35	2.94
23.35	2.44
25.00	2.00

There were no initial DTV allocations to channel 16 close by New York City that would cause land mobile licensees in the New York area a problem because of the Commission's comprehension of this circumstance and the substantial resources they committed when DTV allocations were under consideration. Yet, the value of such a broadcast station, combined with the lack of channel 16 in the New York metropolitan area being designated in the land mobile service, presents the not insignificant potential that some could try to change this circumstance using the method detailed herein.

In the R&O establishing Class A TV stations[28] the Commission stated:

> Analysis involving the DTV *de minimis* interference criteria is exceedingly complex. It would require determining a "baseline" service population for each Class A station, from which to calculate the allowable reductions to the station's service population. Baseline populations would have to account for interference already caused to Class A stations by other full-service, LPTV and TV translator stations, which would require significant revisions to the computer adaptations of OET 69 used by the Commission and consulting engineers. This would be a time consuming process…

[28] Before the Federal Communications Commission, In the Matter of Establishment of a Class A Television Service, MM Docket 00-10, FCC 00115, Report and Order, Adopted March 28, 2000, Released April 4, 2000.

The Commission's acknowledgement of the complex and time consuming process properly neither forecloses nor encourages changes or additions to the DTV allocations since the Commission's rules apply nationwide across all markets. It is apparently possible to use the method, and a copy of the computer code used by the Commission is available. But, the code is almost void of comment statements thus requiring considerable study to be able to correctly modify it. Thus, the Commission has issued the above advice. The NYPD and NYMAC seek to avoid seemingly intractable and endless proceedings that would entertain the possibility of a station being placed in the Hudson River Valley.

MODIFICATION OF THE DTV ALLOCATION TABLE

If one can get a change in the Allocation Table to put a channel 16 in the Hudson River valley, then an application can be made for that channel 16. Changing the Table is handled in §73.623(d). In order to make a change in the Allocation Table one must meet the following coverage and geographical spacing requirements:

> §73.623
> (d)(1) Requests filed pursuant to this paragraph must demonstrate compliance with the principal community coverage requirements of section 73.625(a).
>
> (d)(2) Requests filed pursuant to this paragraph must meet the following requirements for geographic spacing with regard to all other DTV stations, DTV allotments and analog TV stations [VHF omitted in TABLE 4 below]:

TABLE 4
Spacing Required for New DTV Allocation

Channel	**Separation Required**
Co-Channel	
DTV to DTV	Zone I: 198.3 km
	Zone II & III: 223.7 km
DTV to NTSC	Zone I: 217.3 km
	Zone II & III: 244.6 km
Adjacent Channel	No allotments allowed between:
DTV to DTV	24 km and 110 km
DTV to NTSC	12 km and 106 km
Taboo Channels DTV to NTSC	Zone I: 24.1 km and 80.5 km
	Zone II & III: 24.1 and 96.6 km

Notably, in all of the preceding, if one gets an agreement in writing from a station that interference is accepted, then the FCC will permit the applicant station to operate.[29] Yet, NYPD's use of channel 16 in the land mobile service is an aberration, and its standing as an

[29] See §73.623(f) for acceptance of interference from DTV into land mobile and §73.623(g) for acceptance of interference from DTV into DTV.

entity whose permission must be obtained is not recognized in the Commission's rules. Nothing is said in the above about what kind of station was being considered. However, there were no low power or translator stations (Class A did not exist) that received an allocation in the DTV Table. This appears to apply only to full service stations. So, what is the status of low power, translator, and Class A stations?

LOW POWER CLASS A DTV STATIONS

There is a requirement in the rules for a Class A station in §73.6020 that says:

> An application to change the facilities of an existing Class A TV station will not be accepted if it fails to protect stations in the land mobile radio service pursuant to the requirements specified in §74.709 of this chapter. In addition to the protection requirements specified in §74.709(a) of this chapter, Class A TV stations must not cause interference to land mobile stations operating on channel 16 in New York, NY.

This does not specify the form of signal radiated by the Class A station, but it must not interfere with land mobile in New York City. However, after the transition period from NTSC to DTV, LPTV stations are required to transmit a DTV signal. And they can convert to a DTV signal on the same channel at any time (however they do not have a second channel on which to maintain an NTSC transmitter). These TV stations do, however, qualify for protection from interference.

We will not pursue this alternative since there is this mandate to not interfere with land mobile on channel 16 in New York City shown above in §73.6020. Notably, land mobile operations in the New York metropolitan area, and the need to protect them, are recognized only in the Commission's Class A TV station rules.

LOW POWER TV, TV TRANSLATOR, AND TV BOOSTER STATIONS

In Subpart G – Low Power TV, TV Translator, and TV Booster Stations, §74.702(b) of the FCC rules, regarding channel Assignments it states:

> Changes in the TV Table of allotments or Digital Television Table of allotments (§§73.606(b) and 73.622(a) respectively, of part 73 of this chapter), authorizations to construct new TV broadcast analog or DTV stations or to authorizations to change facilities of existing such stations, may be made without regard to existing or proposed low power TV or TV translator stations. Where such a change results in a low power TV or TV translator station causing actual interference to reception of the TV broadcast analog or DTV station, the licensee or permittee of the low power TV or TV translator station shall eliminate the interference or file an application for a change in channel assignment pursuant to §73.3572 of this chapter.

The Commission's rules are emphatic in allowing the installation of a DTV station without any limitation based on the existence of a LPTV or TV translator station, construction permit, or application for such. And, the above does not state a limitation on interference from operation on any channel; if the LPTV station interferes, the licensee must fix it. It appears to apply to

interference by any mode from operation on any channel. This is reinforced in §74.703(b) regarding interference where it says:

> It shall be the responsibility of the licensee of a low power TV, TV translator, or TV booster station to correct, at its expense any condition of interference to the direct reception of the signal of any other TV broadcast analog station and DTV station operating on the same channel as that used by the low power TV, TV translator, or TV booster station or an adjacent channel which occurs as a result of the operation of the operation of the low power TV, TV translator, or TV booster station. Interference will be considered to occur whenever reception of a regularly used signal is impaired by the signals radiated by the low power TV, TV translator, or TV booster station, regardless of the quality of the reception or the strength of the signal so used. If the interference cannot be promptly eliminated by the application of suitable techniques, operation of the offending low power TV, TV translator, or TV booster station shall be suspended and shall not be resumed until the interference has been eliminated…

Yet, with regard to land mobile operations on channel 16 in the New York metropolitan area, the rules provide neither recognition nor protection from potential low power, TV translator, or TV booster operations.

NONCOMMERCIAL EDUCATIONAL TV STATIONS

In §73.621 of the FCC rules it states:

> In addition to the other provisions of this subpart, the following shall be applicable to noncommercial educational television broadcast stations: …

Limitations follow on ownership (nonprofit organizations only), what may be broadcast (educational, cultural, and entertainment for use by schools, produced within or by others, but no payoff to get a program televised, and no advertising are allowed), and other limitations that do not concern us here.

We thus conclude that the technical rules applicable to commercial broadcasters also apply to educational television on the broadcast band.

FCC RULES SUMMARY

The FCC rules have been reviewed to determine what may be necessary for a channel 16 DTV station to be licensed north of New York City. A straightforward approach is to use the spacing criteria to obtain a change in the DTV Allocation Table. A brief preliminary analysis has been made to determine if the Commission's rules preclude it; it appears that they do not. An analysis of known channel 15 and 16 nearby stations will provide additional insight into the potential of a channel 16 being placed north of the metropolitan area of New York City. That analysis will now be given.

ANALYSIS

A total of 13 stations are shown in TABLE 5 with their distance from New York City center.

TABLE 5
Channel 15 - 17 TV Stations Near New York City

				47CFR§90.303 REFERENCE FOR NY		40-45-06	73-59-39	
	State	**City**	**CALL**	**Status**	**Service**	**Latitude**	**Longitude**	**Miles**
15	NY	Buffalo	W15BH	LIC	CA	43-01-32	78-55-43	298.3
15	NY	Rochester	WBXO-LP	LIC	TX	43-08-07	77-35-07	247.2
15	MS	Boston	900523KF	CP Expired 5/3/95				
15	PA	Lancaster	WLYH-TV	LIC	TV	40-15-45	76-27-53	134.1
16	PA	Pittsburgh	WQEX	LIC	TV	40-26-46	79-57-51	313.7
16	PA	Scranton	WNEP-TV	LIC	TV	41-11-00	75-52-10	102.2
16	NY	Watertown	WPBS-TV	LIC	TV	43-51-44	75-43-43	232.3
16	NY	Ithaca	W16AX	LIC	CA	42-25-47	76-29-49	173.6
16	CT	Hartford	W11BJ	CP	TX	41-42-13	72-49-57	89.2
17	PA	Philadelphia	WPHL-TV	LIC	TV	40-02-30	75-14-24	81.8
17	NY	New York	WEBR-CA	LIC	CA	40-44-54	73-59-10	0.5
17	NY	Plainview	W17CR	CP	TX	40-47-44	73-27-40	27.7
17	CT	Stamford	W17CD	Under Remain Silent Authority	TX	41-04-32	73-32-55	32.3

W11BJ, close to New York City with an application for a low power or translator station, is addressed later this report and demonstrates the need to protect the channel 16 land mobile operations. Another close licensee to New York is WNEP-TV with a construction permit for a DTV station to be located in Scranton, PA on channel 16. We use it here to determine if the mileage requirement to place a DTV station in or near one of the cities in Figure 1 can be met.

The distance from the WNEP-TV application for Scranton to the approximate center of the metropolitan areas of Kingston, Newburgh, and Middletown, is 107, 97, and 78 miles respectively. The requirement from §73.623(d) above for Zone 1 (where New York City is located) is 198.3 km (123 miles) separation, so none of the cities is far enough away. However, a new DTV station can be located about 16 miles east of Kingston, and meet the requirement (98 + 16 = 124 miles). Investigation of that area shows that Stissing Mountain with peak elevations over 1,400 feet is about 16.7 miles east of Kingston. This is farther away from all of the active stations but one in the Boston area. Station, 900523KF, is listed by the CDBS public access web page as an experimental station with a construction permit that was granted, but it expired May 3, 1993. There is no further action listed, so this is not an issue.

Therefore, a DTV station approximately 16 miles from Kingston, New York appears to be possible under the Commission's rules, and it would have the potential to adversely affect land mobile operations on channel 16 in the New York metropolitan area.

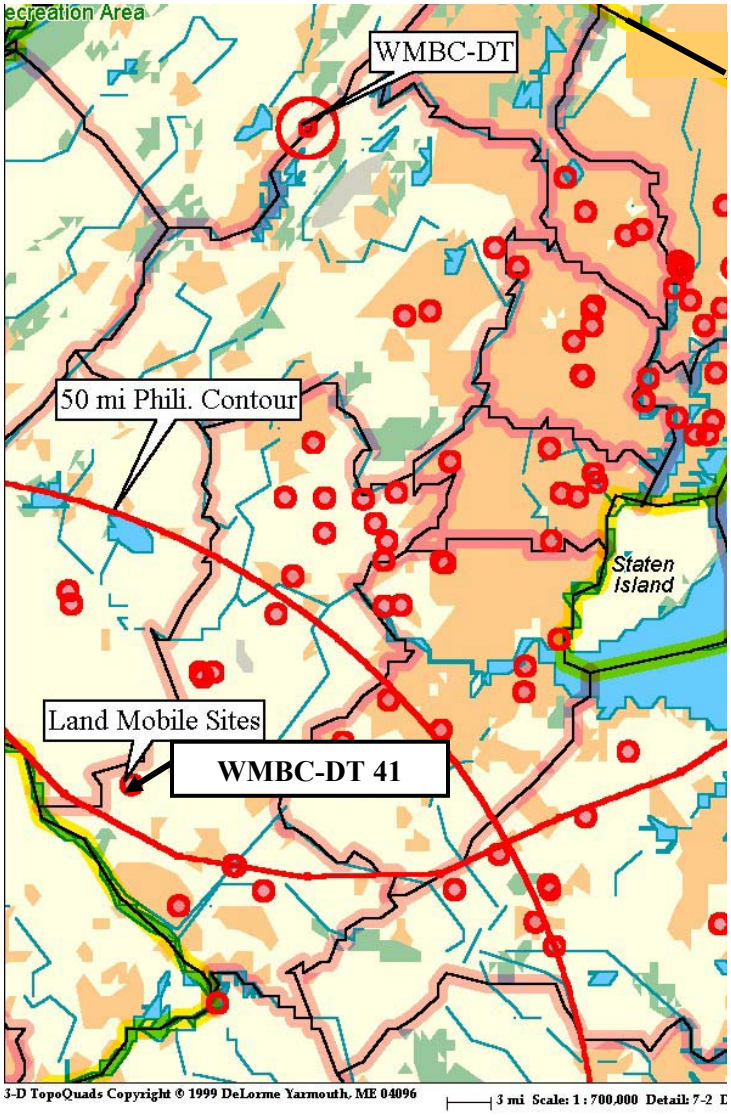


Figure 2 Northern New Jersey channel 19 land mobile base station sites.

CAN IT REALLY HAPPEN?

In §90.305 of the Commissions rules, TV channel 19 is assigned for use by land mobile radio base stations within 50 miles of the coordinates assigned to Philadelphia, PA. Figure 2 shows a map of an area of northern New Jersey with many land mobile stations, all on frequencies within TV channel 19. The 50 mile contour is shown, and 17 of these land mobile sites are within the 50 mile contour line from Philadelphia. They are listed in TABLE 6 (The others are there based on waivers from the FCC.) Ten of the 17 are also within the 41 dB□ contour of WMBC-DT a DTV station located in Newton New Jersey. A construction permit has been issued for WMBC-DT channel 18 to Mountain Broadcasting Corporation in a trade with WNJB in New Brunswick, New Jersey. The construction permit listed an allowed ERP of 50 kW, but there was an application to increase that to 95 kW at an HAAT of 1093 feet that was also approved. Finally, a request for extension of the CP has been granted until December 12, 2003[30]. WMBC-DT is thus authorized to be adjacent to the licensed land mobile users in TV channel 19, at a location where the potential for interference exists.

TABLE 6
Land Mobile Stations in TV Channel 19
That Are Within the Philadelphia 50 Mile Contour

LOCATION	CALL	LAT	LON	MILES TO PHILI.	MILES TO WMBC-DT
Flemington	KJW567	40-33-16	74-54-15	43.8	35.6
Flemington	WIJ528	40-32-30	74-54-00	43.1	36.2
Hillsborough	WIL900	40-31-54	74-37-59	48.7	33.2
Neshanic	WPKP640	40-28-27	74-42-55	43.0	37.7
Neshanic	WIL900	40-28-10	74-43-43	42.4	38.1
Belemead	WIJ782	40-27-06	74-43-57	41.3	39.4
N. Brunswick	WIM689	40-26-49	74-29-13	49.2	39.4
Monmouth Junct.	WIJ458	40-24-19	74-32-46	45.0.	42.0
Hopewell	PNO25223	40-21-48	74-49-19	35.5	46.3
Clarksville	KNS818	40-17-00	74-41-20	33.8	50.6
Clarksville	WPPH715	40-16-58	74-41-11	33.8	50.6
Milstone	WII217	40-15-34	74-24-03	45.3	52.9
Trenton	KZM473	40-15-30	74-38-39	34.2	52.1

[30] See Application under FCC file number BEPCDT 20020204ABA granted February 25, 2002.

Trenton	W11414	40-14-36	74-45-36	29.1	53.8
Freehold	KRW414	40-13-39	74-17-45	49.3	56.3
Freehold	WIJ783	40-12-13	74-16-15	50.0	58.3
Bordentown	KSB669	40-08-50	74-42-35	27.3	60.0

The 41 dB contour was computed for a receiving antenna height of 30 feet above ground. However, the base station antennas of the land mobile licensees are well above that height. Therefore they are at much greater risk than the mobiles. So, in answer to the question: "Can it really happen?" we must answer that it appears that much the same thing has already happened.

SUMMARY REGARDING
A POTENTIAL DTV CHANNEL 16 NEAR NEW YORK

A review of the FCC rules shows that it is possible to locate a DTV station north of New York City by applying for a modification to an existing facility as detailed in §73.623(c)(2). This can be done by computing interference using the DTV *de minimis* interference criteria. It requires that interference be limited to a maximum of 10 percent of the viewing population of all protected stations in the area from the proposed station and all other stations in the area. While the Commission warns that this approach is difficult and time consuming, it leaves open the possibility for an applicant to pursue such an approach.

There is also another way. The DTV Allocation Table can be modified by applying the geographical spacing rules in §73.623(d) to the spacing between the site of the proposed station and all existing and proposed protected TV stations. Then an application can be applied for at that location. A preliminary assessment of this approach shows that it may be possible to use it north of New York City.

The example of channel 18 in Newton, New Jersey is used to show that an adjacent channel DTV station has already been assigned to an area nearby a city which is allocated for use by land mobile, and for which the potential for interference is very high.

Additionally, because channel 16 is not formally designated in the land mobile service, there is also the potential for an application to locate a low power, TV translator, or TV booster station in the New York metropolitan area. This would present substantial challenges to channel 16 land mobile Public Safety operations.

Thus, we conclude that it is necessary to take action to provide protection for the use of TV channel 16 by public safety in the New York City area.

FCC REQUIREMENTS FOR LAND MOBILE USE OF 470-512 MHz BAND

The FCC has technical rules in CFR 47 90.309 for the use of channels in the 470-512 MHz band in which channel 16 is located. These rules limit the close spacing, power, and transmitting antenna height of any land mobile facility and the close by TV transmitters that are co-channel and adjacent-channel to the land mobile use. For transmitters operating within the New York metropolitan area, there are significant hills and mountains that provide attenuation to potential interference signals. Therefore, it is appropriate to use the 40 dB protection provided by the maximum ERP in Table B of §90.309. In order to operate with no limitations on transmitter height and power, the Table shows that the co-channel spacing must be 130 miles or more. In addition, the adjacent channel spacing must be 67 miles or more as shown in §90.309 Table E. Limited use is allowed for spacings as small as 90 and 60 miles respectively.

PROPOSED CONTINUED LAND MOBILE USE OF CHANNEL 16

With the limitations that were imposed on land mobile usage when channel 16 was first proposed for the New York City area in 1994, successful coexistence has resulted. However, because of the existence of WNEP-TV in Scranton, Pennsylvania and WPHL-TV in Philadelphia, Pennsylvania, limitations were placed on the ERP of base and mobile units in Bergen County New Jersey that were more stringent than on systems east of the Hudson River and Kill Van Kull.[31] Experience has shown that these limitations effectively prohibit use of channel 16 west of the Hudson; therefore licenses in channel 16 west of the Hudson are non-existent. Consequently, only continued use of channel 16 by Public Safety agencies in New York City (all five boroughs), Nassau and Suffolk Counties is being proposed.

The possibility of interference to WNEP-TV and WPHL-TV was addressed when this channel was first proposed for land mobile use in 1994. Based on §90.309, the limitations on land mobile usage that were imposed at that time have resulted in successful coexistence. We propose that those limitations remain in effect. The proposed use of channel 16 west of the Hudson River and Kill Van Kull is therefore limited to 225 Watts at an antenna height of 152.5 meters (500 feet) above average terrain. We also propose that adjustments of the permitted ERP be allowed when in accordance with the "169 km Distance Separation" entries in Table B or permitted by Figure B of §90.309(a)(5) of the FCC rules.

[31] For base stations in Bergen County this limitation was to entries specified in Table B or prescribed by Figure B in §90.309 of the FCC Rules for the actual separation distance between the land mobile base station and the transmitter site of WNEP-TV, Scranton PA. For mobiles in Bergen County this limitation was 10 Watts ERP .

CHANNEL 16 AVAILABILITY

Under the Commission's Order permitting temporary use of channel 16 for public safety communications, the Commission established the parameters of its operations, which are set forth in Appendix 4 (pp 39)(hereinafter referred to as "parameters"). These parameters generally follow the premise of the methodology used by Subpart L of Part 90 of the Commission's rules, Authorization and Use of Frequencies by Land Mobile Stations in the Band 470-512 MHz in certain Urbanized Area, but are structured to comport with use by public safety and non public safety entities in the New York Metropolitan area.[32] This technical analysis is based on the ability to place channel 16's public safety communications infrastructure within the New York Metropolitan area consistent with the parameters.

The TV stations close to New York City have been compiled from the FCC database, and were shown in TABLE 5. The great-circle distance to these TV stations from the coordinates of New York City was determined, and is shown in that TABLE. The adjacent channel requirement between full power and height land mobile base stations and full service TV stations in this band is listed in 47CFR§90.309 table E as 108 km (67 miles). The land mobile base stations can be up to 80 km (50 miles) from the coordinates of the city. So, the minimum distance from the city center to any TV station should be 108 + 80 = 188 km (117 miles). The existing adjacent channel 15 stations in this TABLE 5 all meet this requirement. The channel 17 stations are another matter indeed.

WPHL-TV channel 17 interference was originally addressed by the Commission when channel 16 was proposed for use by land mobile in the New York area. The allowed power and height were adjusted so that interference to WPHL-TV would not occur, and satisfactory performance has resulted over the years of operation. There is a present agreement with WEBR-CA channel 17 and this review addresses this circumstance in more detail. We do anticipate significant interference from the proposed operation of W17CR to nearby base stations in Nassau and Suffolk counties. This interference situation must be dealt with by the Commission.

W17CD in Stamford, CT is close to New York City as shown in TABLE 5, and even closer to the Suffolk County Police Department (SCPD) sites. However, it is a translator radiating most of its 100 kW ERP east by north east. Never-the-less, because of its close proximity to SCPD sites operating within the Commission's parameters; it has the potential to cause significant interference. Should they receive authority to go on the air, they too will be a problem for the Public Safety land mobile stations nearby.

[32] *In the Matter of Waiver of Parts 2 and 90 of the Commission's Rules to Permit New York Metropolitan Area Public Safety Agencies to use Frequencies at 482-488 MHz on a Conditional Basis*, FCC 95-115, 10 FCC Rcd 4466, at Appendix (March 17, 1995)

The co-channel separation requirement for full height and power land mobile base stations to full service TV stations is given in 47CFR§90.309 Table B as 209 km (130 miles), and adding as before the minimum separation between the city center and the TV station is 209 + 80 = 289 km (180 miles).

WQEX channel 16 in Pittsburgh, PA meets this criterion, but the channel 16 stations WNEP-TV in Scranton, PA and W16AX in Ithaca, NY do not. But, they do not need to do so. The range of land mobile base stations and mobile radios in the direction of these co-channel stations is limited by the Hudson River, and is 153.1 km (95.1 mi.) and 273.1 km (169.7 mi.) respectively. So, W16AX in Ithaca, NY does meet the 209 km actual separation requirement for full power and height stations. WNEP-TV was originally addressed by the Commission, and the allowed land mobile power and height were reduced so that stations east of the Hudson River and Kill Van Kull do not interfere with WNEP-TV. We will now address channel 16 W11BJ in Hartford, CT.

POTENTIAL W11BJ INTERFERENCE TO SCPD

The analysis herein will show that TV station W11BJ will cause significant interference to existing public safety communications within the New York metropolitan area. They do this by interfering with the reception of signals transmitted from mobiles and portables as received at a base station antenna. This section uses Longley-Rice path loss values[33] to estimate the interference potential of TV channel 16 W11BJ transmissions to SCPD base station receivers that have been placed throughout the County consistent with the Commission's parameters. The map of Figure 3 shows Suffolk County and W11BJ. The TV station is located at Latitude 41-42-13 N, longitude 72-49-57 W, with its antenna center 274 feet above local ground level and an ERP of 275 Watts as determined from the FCC CDBS Public Access data base.

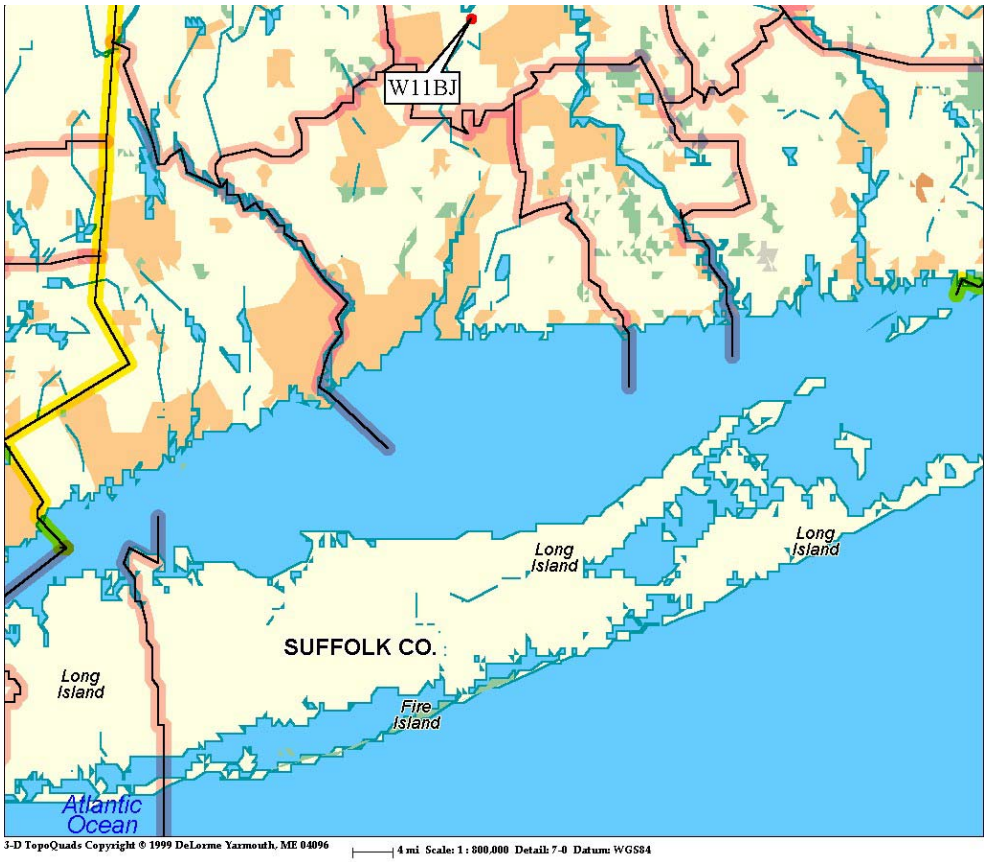


Figure 3 Location of SCPD Public Safety Base Stations at risk to interference from proposed channel 16 operation by W11BJ in Hartford CT, shown.

[33] G. A. Hufford, A. G. Longley, and W. A. Kissick, "A Guide to the Use of the ITS Irregular Terrain Model in the Area Prediction Mode," NTIA Report 82-100, April 1982.

Figure 4 shows the elevation profile between a typical SCPD site and W11BJ. This profile has been drawn so the path of a radio wave will be a straight line, and it clearly shows that there is not a direct line-of-sight path between the W11BJ transmitting antenna and the SCPD base station receiving antenna. This is also true for the other sites; thus the choice of the Longley-Rice propagation model is appropriate.

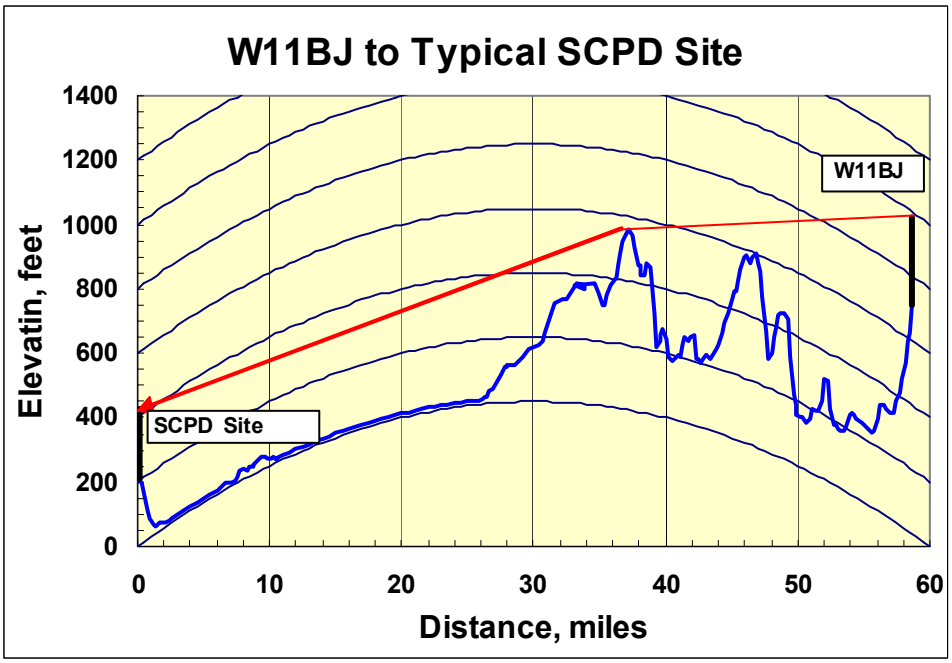


Figure 4 Elevation profile between W11BJ and a typical SCPD site.

W11BJ is directional, and Figure 5 shows the relative electric field horizontal pattern of the antenna. The ERP in the direction of the SCPD sites is modified by the directivity as shown here. Distance and heading values are calculated using a great circle navigation program, and the magnitude of the horizontal pattern in the direction of specific SCPD sites is determined from the heading and this pattern.

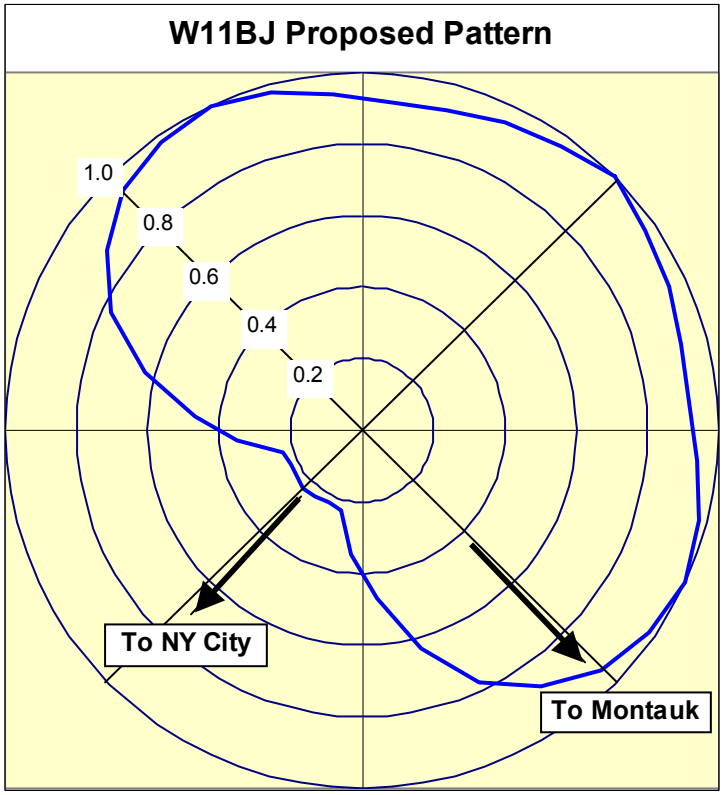


Figure 5 Electric field horizontal pattern of W11BJ showing the span of directions to SCPD sites to the south.

In order to compute the interference, the ERP must be adjusted based on frequency offset from the visual carrier. For this, the maximum level reached ten percent or more of the time in over-the-air measurements of a typical TV station in Chicago, IL has been used. A graph of that spectrum, normalized to channel 16, is shown in Figure 6.

The value of Longley-Rice path loss is taken as the value exceeded at least 10% of the time for 10% of the "situations". Three SCPD sites, (#1, #2 and #3) have interference levels exceeding –123 dBm, the noise floor usually associated with land-mobile receivers. These receivers have 0.25 μV sensitivity, at 12 dB static SINAD audio quality and 4 dB signal-to-noise ratio. It is noted that noise-like interference (expressed as power, not dB) adds to the noise floor. So, received interference at –123 dBm doubles the equivalent noise, resulting in a net 3 dB degradation in sensitivity. Thus, the interference at these three sites causes degradation in excess of 3 dB.

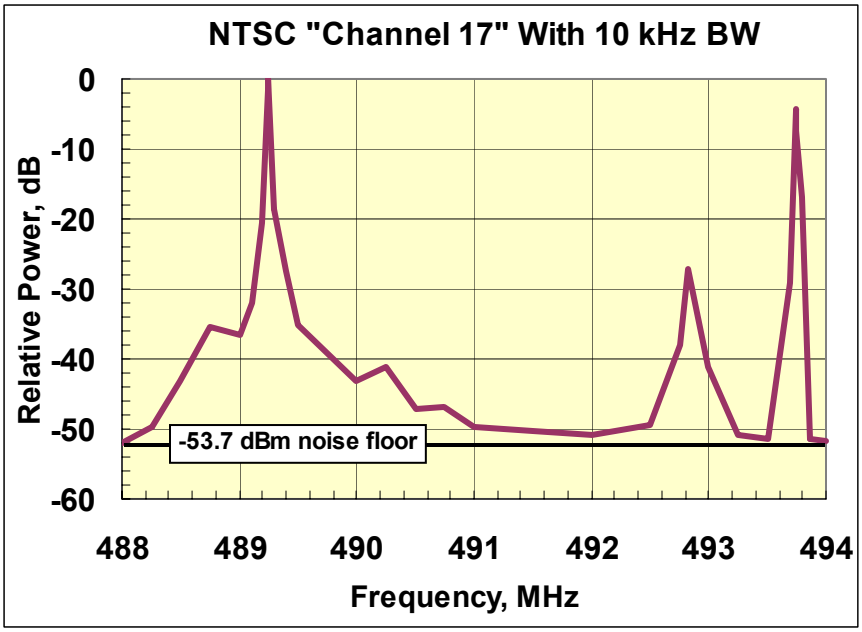


Figure 6 Typical NTSC spectrum observed with 10 kHz resolution bandwidth at the point where 10 percent of the observations are greater (90 percent are smaller) than the values indicated.

At large distances from a base station, it is typical to use 12 dB as the gain necessary to double the geographic range of a signal. However, at shorter ranges, a more typical number is 10 dB.[34] This is used in the analysis in TABLE 7 to quantify the interference for the three sites and the reduction in coverage area. The sum of the factors from the ERP to the receiving antenna and coaxial cable net gain yields the received interference. That interference plus the noise floor, compared to the noise floor alone, is then used at 10 dB per octave to determine the column of percent coverage area remaining.

This represents a severe reduction in coverage when over 70 percent of the coverage from one site is placed at risk. If this is allowed to happen, it will place life and property at severe risk in the areas affected. Additionally, it must be noted that this is not the only source of interference that may be present in the area of the SCPD sites. There is potential interference from a newly approved low power TV station on channel 17 W17CR in Plainview, New York that was noted in TABLE 5 in an earlier section of this report. Out of band transmissions from that source will also add to the noise and interference from W11BJ and potentially make the situation even worse.

[34] This is the factor for the Okumura propagation curves in the range of 1 to 20 km with a mobile antenna 1.5 meters above ground and a base antenna 61 meters above ground.

TABLE 7
Range Reduction To SCPD Sites Due To Interference from W11BJ

SITE	ERP dBm	Antenna Patt. dB	TV Freq. Resp. dB	Longley Rice dBd	Rx Ant & Coax, dB	Net dB Interference	Remaining Coverage
SCPD Site # 1	54.4	-6.0	-34.7	-132.5	4.0	-114.8	29 %
SCPD Site # 2	54.4	-2.6	-31.0	-139.9	4.0	-115.1	33 %
SCPD Site # 3	54.4	-2.0	-35.4	-140.6	4.0	-119.6	50 %

WEBR-CA CHANNEL 17 MEASUREMENTS

WEBR-CA channel 17 broadcasts from the TV channel adjacent to the NYMAC members. Its transmissions are particularly important to use by the NYPD and other agencies now, as well as in the future build-out by Public Safety agencies in channel 16. WEBR-CA radiates a maximum ERP of 1.07 kW circularly polarized (equal power of 1.07 kW in both horizontal polarization and vertical polarization) with a horizontal cardioid-like antenna pattern[35] shown in Figure 7 that points to the northeast. The vertical pattern has a half-power (3 dB) beamwidth of 2.5 degrees and it is down tilted 2.5 degrees as shown in Figure 8. The antenna is mounted on the side of the Empire State Building with a RCAMSL of 322 meters. There is building blockage in the direction of the backlobe in the horizontal antenna pattern.

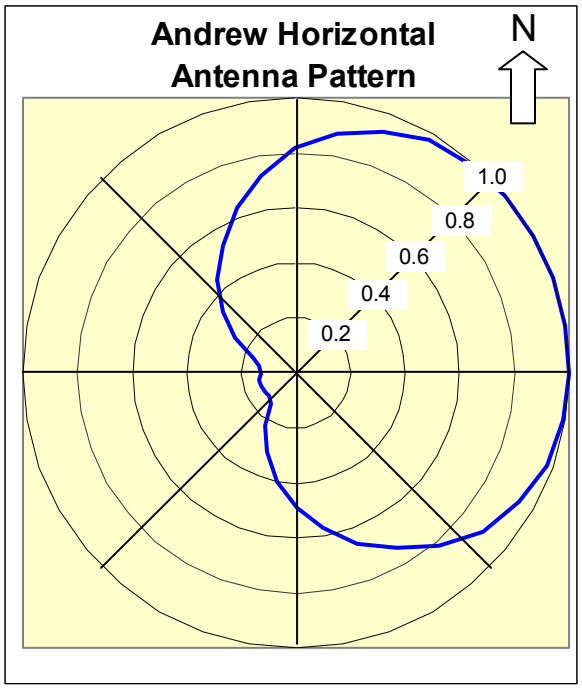


Figure 7 Relative horizontal field pattern of WEBR-CA on channel 17.

There are many base receiving sites on TV channel 16 that NYPD has installed throughout New York City, a map of which appears in Figure 9. The Empire State Building is also plotted on this map. It is evident that there are many NYPD sites that

[35] This pattern, as well as the vertical pattern to follow is read from ENGINEERING STATEMENT PREPARED IN SUPPORT OF MINOR AMENDMENT OT LPTV DISPLACEMENT APPLICATION WEBR CA CHANNEL 17Z K LICENSEE, INC. PBTTL-19991201AAP MANHATTAN, NEW YORK, September 2000, updated 3-20-2002, WEBR Figure 1B (for vertical polarization) of the ANDREW ALP16L10-CSER-17 antenna. The slight non-symmetry suggests the pattern may be measured. This is not the horizontal pattern nor antenna model that is shown in the FCC CDBS public access database, but we are assured by WEBR-CA that it is the antenna and pattern that is in use.

are in the direction of the main beam of the WEBR-CA horizontal antenna pattern and that are very close to the WEBR transmitter.

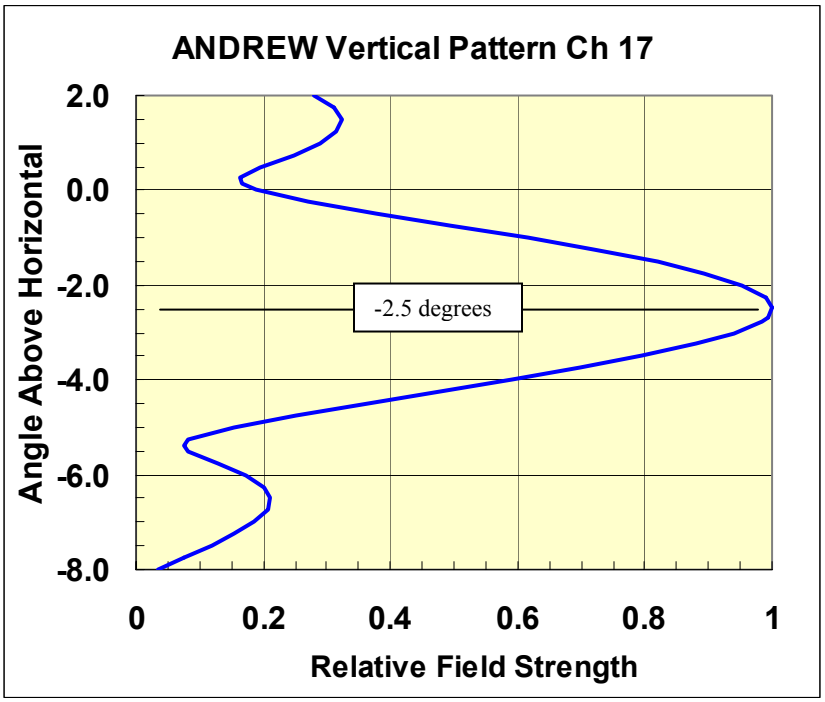


Figure 8 Relative Vertical field pattern of WEBR-CA on channel 17.

There is the potential for interference from splatter outside of the TV channel 17 band of WEBR-CA into the receivers of NYPD that occupy TV channel 16. For that reason, it is necessary to quantify the level that may be occurring at the present time. An estimate can be made with computations, but this must ultimately be done with measurements.

COMPUTED NOISE LEVEL

The advertised ERP of WEBR-CA[36] is 1.07 kW, but this is in the direction of the horizon from their location at an elevation of 322 meters on the Empire State Building. The radio horizon is reported to be at an angle down from the horizontal by 0.49 degrees, and it is at that angle the ERP of 1.07 kW is quoted. The magnitude of the vertical field pattern at 0.49 degrees below the horizontal is quoted as 0.3803. This is 8.39 dB below

[36] The ERP and other technical details are taken from Engineering Statements made in support of WEBR-CA by Clarence Beverage of Communications Technologies Inc. This material is contrary to technical information obtained from the FCC CDBS public access web site, and the license issued to WEBR-CA. However, Mr. Beverage assures us that this is the correct information. The FCC shows the ERP to be 2.0 kW, the polarization to be horizontal, and the horizontal antenna pattern is different as is the antenna model number.

the main-beam maximum, and when the 1.07 kW is increased by 8.39 dB the resulting maximum ERP in any direction is 7.40 kW. This value is modified by the directivity in the direction of the NYPD station under consideration.

Figure 9 NYPD base stations (transmitter and receiver) that use frequencies in the 6 MHz of TV channel 16 are located throughout New York City, consistent with the parameters established by the Commission.

(Coordinate datum NAD83/WGS84. Distance in km from Empire State Building coordinates N40-44-54.35 W73-59-8.53).

The other factor that must be considered is the radiated energy outside of the channel 17 band into channel 16 where the NYPD receivers are located. Measurements of a typical

NTSC transmitter signal have been made in-band with a spectrum analyzer as shown in Figure 10. Then, an estimate was made of the out of band emissions of a potential low power TV transmitter; it is also shown in Figure 10. This estimate is purposely made so that the interference resulting is probably high, but it can be used until the measurement program is completed and the actual field results are known.

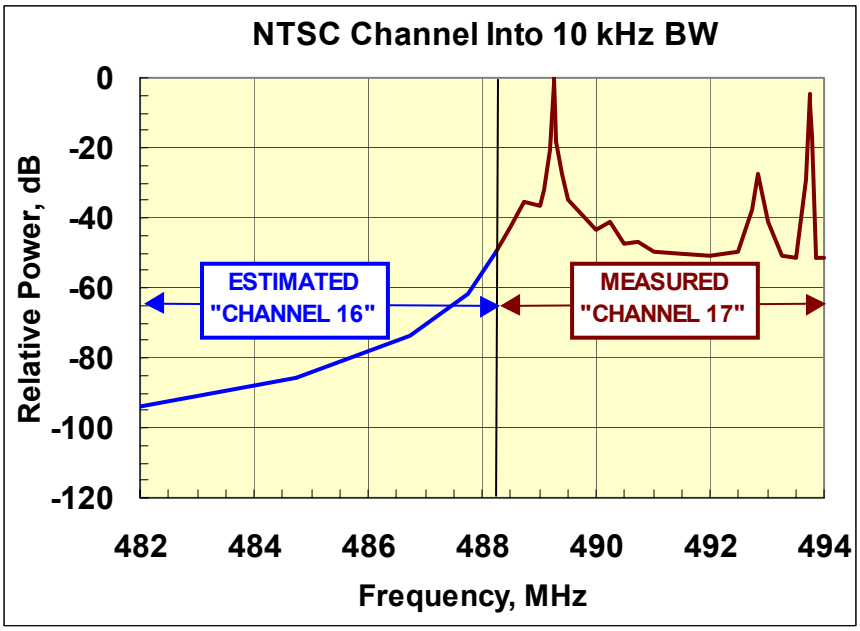


Figure 10 Potential interference power that may be produced by WEBR-CA based on the 10th percentile highest values measured on an NTSC signal in band.

Because of the height of the Empire State Building, and the tall NYPD receiving sites, the free space propagation model is appropriate. The antenna at the NYPD receiving site is omnidirectional, and we will use a 7 dBd gain antenna and 3 dB of transmission line loss to bring the signal down to the receiver. Using this, and the other parameters described above, the level of the interference received by each NYPD station examined was computed by summing the gains and losses in dB. The results are shown in TABLE 8, and NYPD Site # 4 is highlighted as the computed worst case site

A noise floor of –123 dBm establishes sensitivity for typical land mobile equipment with a 15 kHz IF. Thus, we see that there is the potential for significant interference at almost all the sites. The lowest level is at a site that is protected by being in a null of the vertical pattern and being over 2 ¼ MHz away from the band edge of WEBR-CA.

However nulls in an antenna pattern are known to be difficult to predict, so this may well be higher.[37]

TABLE 8
Computed Base Receiver Interference to NYPD From WEBR-CA

	ERP dBm	Patt. Loss	Splatter Attn.	Path Loss	Rx Sys Gain	Received Pwr dBm
NYPD Site # 1	67.4	-0.2	-74.1	-98.1	4.0	-101.0
NYPD Site # 2	67.4	-0.9	-79.4	-92.9	4.0	-101.8
NYPD Site # 3	67.4	-8.2	-77.9	-83.7	4.0	-98.4
NYPD Site # 4	67.4	-0.8	-68.5	-95.4	4.0	**-93.2**
NYPD Site # 5	67.4	-29.0	-80.0	-85.8	4.0	-123.3
NYPD Site # 6	67.4	-17.6	-76.4	-85.9	4.0	-108.5
NYPD Site # 7	67.4	-1.8	-65.8	-100.2	4.0	-96.3
NYPD Site # 8	67.4	-2.5	-62.8	-102.1	4.0	-95.9
NYPD Site # 9	67.4	-3.8	-68.8	-103.8	4.0	-105.0
NYPD Site # 10	67.4	-2.8	-71.5	-102.2	4.0	-105.1

Recently the FCC issued a construction permit for a channel 17 low power 1 kW maximum ERP TV station W17CR to be located in Plainview, New York.[38] Should this station be constructed, it is anticipated that there will also be similar interference to public safety land mobile operations from this source. Further, the noise power from this station will add to the interference already present from WEBR-CA and the other sources described herein.

MEASUREMENT METHODOLOGY

The above indicates that current and future uses of channel 16 as it relates to WEBR, raises questions, calling for additional measurement and analysis. Since they are close to the WEBR-CA transmitter, it is recommended that the signal received at all ten NYPD

[37] It is well known in the antenna industry that a null is made up of the sum of the contributions from each radiator when they add out of phase. Thus, computed nulls are often in error by over 10 dB.

[38] Construction permit issued to CATHOLIC VIEWS BROADCASTS, INC, file number BMPTTL-19990917AAN, grant date August 19, 2002

sites be measured. The goal is to produce a cumulative distribution of the received signal on 20 land mobile channels spaced approximately equally over the channel 16 TV band at each site. However, these measurements must be made on frequencies that are not presently occupied by NYPD or by any other nearby public safety facilities. Vogel Consulting Group has been supplied a list of frequencies that are occupied by NYPD, and that are used for mobile data applications in the channel 16 TV band and are plotted in Figure 11. It is evident that exact equal spacing cannot be maintained, but a suggested list of frequencies which are not in use and are unoccupied by NYPD, were also examined. Channel 16 licensed frequency lists have also been obtained from Nassau County and Suffolk County, and the frequencies examined do not appear on their use lists. However, they should be checked with any other potential sources to determine that they are in fact not being used by others, before the measurement program is initiated.

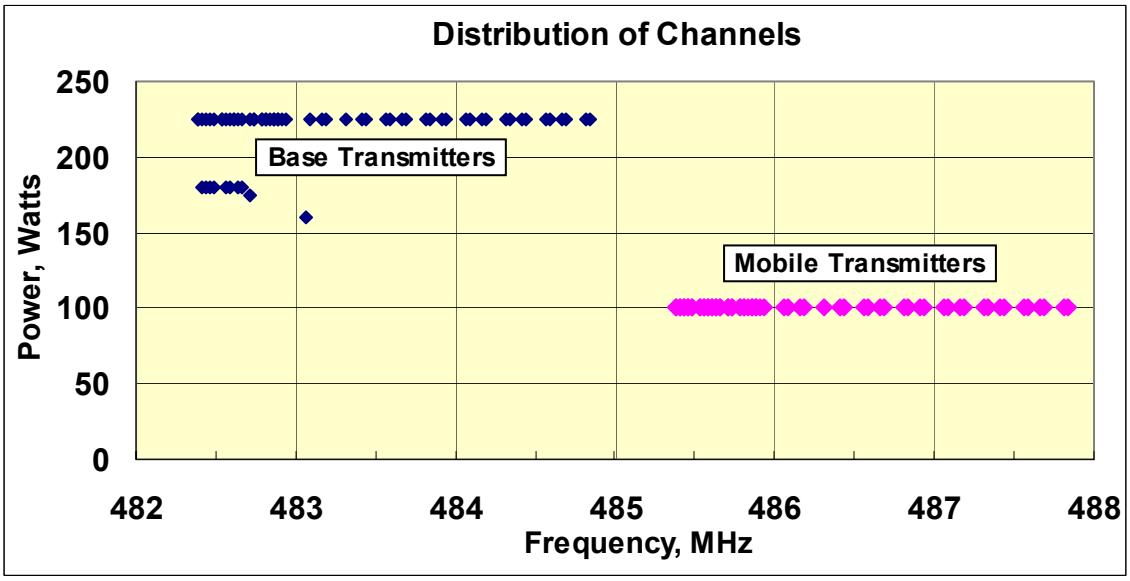


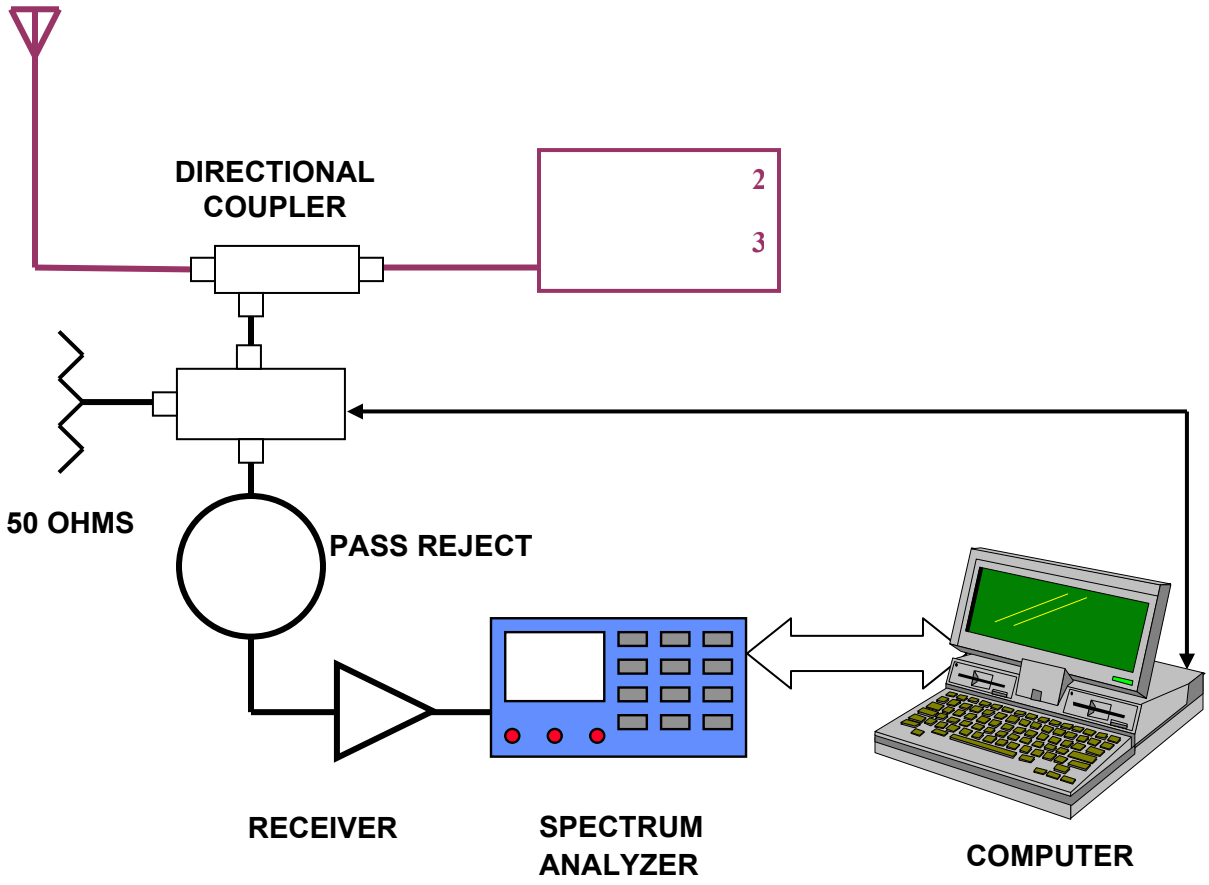
Figure 11 Licensed ERP of transmitters of NYPD that are in the TV channel 16 frequency band.

Measurements will be made over a minimum of 24 hours at each site. A spectrum analyzer will be used to make the measurements; one with a computer port is necessary so that the measurement can be automated by using a computer where the data can be stored for processing. An Agilent model E4401B or equivalent is suggested. The proposed measurement configuration is shown in Figure 12. In addition to the computer and spectrum analyzer, a directional coupler is necessary to couple energy from the antenna transmission line. Assuming that a one-day reduction in receiver sensitivity of 3.5 dB[39] is allowable, a 3 dB directional coupler should be used so there will be adequate

[39] A 3 dB reduction in receiver sensitivity is usually just perceptible to personnel in the field, so this should not be objectionable for the period of the test.

signal to provide the dynamic range necessary in the measurement. Any of the 50 Ohm 3 dB directional couplers made by Narda or HP and that function over the 482 to 488 MHz bandwidth of the measurement should be adequate. If the coupler has a fourth port, that port should be matched with a 50 Ohm load.[40]

Protection of the spectrum analyzer from the picture carrier of WEBR-CA is necessary, and a notch filter such as the Radio Frequency Systems (RFS)[41] 1155 can provide isolation. In order to reduce the noise floor of the measurement and provide additional protection, a receiver multicoupler is shown. The RFS RMC460 series is acceptable. Finally, in order to record the noise floor of the measurement system, a separate 50 Ohm load is to be provided along with a computer controlled RF switch. The computer can then switch between the antenna coupler and the load to provide this measurement.



[40] If the site is equipped with a receiver multicoupler, and a spare port is available, it can be used. Then the directional coupler can be deleted from the measurement system.

[41] Radio Frequency Systems was formerly known as Celwave.

Figure 12 Measurement configuration integrated into site receiver equipment

To maximize sensitivity and match the selectivity of base station receivers as closely as practical, spectrum analyzer resolution and video bandwidths of 10 kHz each should be used. To prevent overloading of the spectrum analyzer, the WEBR-CA video carrier power at 489.25 MHz should be conservatively maintained under –20 dBm (1 dB gain compression is specified as 0 dBm for the E4401B analyzer). Frequencies should be programmed into the analyzer in a circular fashion at a rate of one per second and measurements taken using a zero frequency span. This will produce 86,400 measurements per day (4320 measurements per frequency per day). Data collection must cover at least one full day. Confirmation that WEBR-CA is the source of the observed power can be made through comparisons of the average signal level just before and just after transmitter shutdown or turn-on.

The gain and/or loss of each component above will be recorded before the measurements are initiated. Then, at each location, document the type of antenna being used, the type and length of transmission line being used, and if possible take a picture of the antenna with the Empire state building in the background. If it is not possible to show the Empire State Building in the background, note the building that prohibits direct line of site so it can be pointed out in the report. Note the date and time the data taking started and when it ended, and the frequencies on which data was taken.

It is recommended that the first measurements be made at a site most impacted by WEBR-CA. This would be a site located close to the Empire State Building and the NYPD antenna at this location is in both the vertical and horizontal pattern main beam of WEBR-CA. So, it has the potential to receive the largest signal from WEBR-CA.

PRELIMINARY RESULTS

Measurements have been made at the first measurement site on isolated frequencies using a 15 kHz IF tunable receiver with external tuned band pass and band reject filters. The latter rejected the high power carrier of WEBR-CA channel 17 to eliminate desensitization of the receiver, and the band pass filter was used to reject other sources of noise in nearby frequencies. A multicoupler adjusted for 0 dB net gain was available at the site with a spare port, so the 3 dB directional coupler was not necessary to obtain the signal. There was about 200 feet of ½ inch foam coaxial cable (attenuation 3.04 dB at 500 MHz) attached directly to a 5 dB omnidirectional co-linear antenna. The receiver and filters were tuned to a particular frequency and the magnitude of the signal was noted on the meter of the receiver. Then a matched adjustable calibrated signal generator was used by substitution to bring the meter on the receiver to the same reading as the “noise”. The magnitude in dB was then recorded.

By removing the band stop filter attaching the antenna directly to the receiver and using appropriate attenuators the video and aural carriers were also measured, again using substitution. The results are shown in Figure 13 superimposed on the spectrum used by the NYPD.

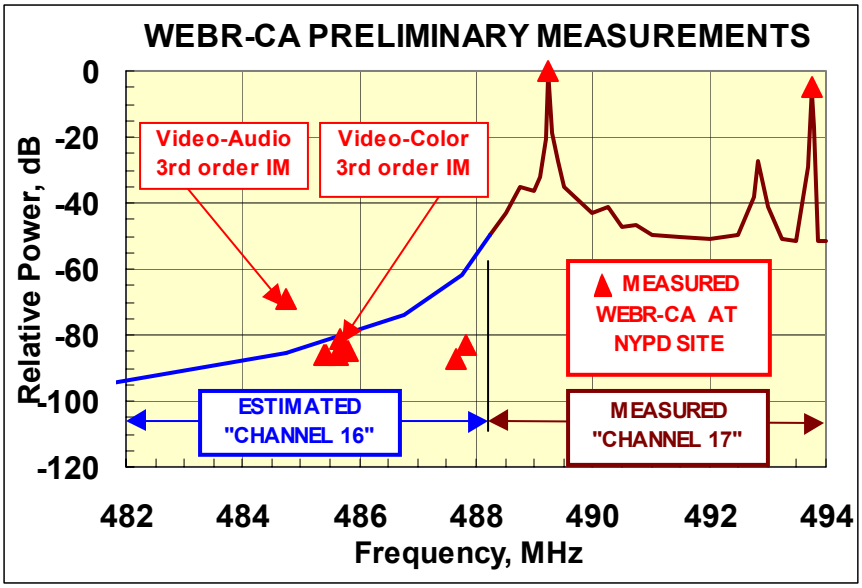


Figure 13 Preliminary measurements of WEBR-CA channel 17 signal into a receiver at the NYPD site at first measurement site normalized to the Video Carrier.

The worst-case received interference measured –99 dBm at the measured UHF frequency. This is an increase of 24 dB from the ambient noise level in the land mobile receiver. A third order intermodulation product from the video and audio carriers of channel 17 occurs at this frequency. A third order product from the video carrier and the color sub-carrier of channel 17 also occurs within the 15 kHz land mobile IF centered at another frequency within channel 16. Interference at this frequency measured –111 dBm, and it produces an increase of 7.8 dB in the noise plus interference in the receiver. Other measurements near the latter frequency resulted in interference between –114 and –116 dBm.

The 10 dB per octave range reduction developed above translates these interference levels to reductions in area covered. The –99 dBm interference level reduces the coverage area of the channel at that location by 96.5 percent leaving only 3.5 percent of the area covered. The –116 dBm interference level reduces the coverage area by 66 percent leaving only 34 percent of the area covered.

By good design, the worst case frequency measured above is not in use by NYPD. But frequencies that are in use appear to have less than 35 percent of their potential area of

coverage remaining. However, detailed measurements are necessary to confirm this conclusion.

PRELIMINARY MEASUREMENT CONCLUSION

The preliminary measurements indicate that there is a severe reduction in coverage area of the NYPD site at the impacted site of frequencies that are in use. Should the levels be confirmed by further measurements, continued degradation of the noise floor by interference may lead to severe consequences when coverage and capacity is strained in an emergency.

CONCLUSION

A search has been conducted to find spectrum to permit the NYMAC public safety members to implement needed improvements in their communications systems. None could be found to satisfy the present need. The continued use of channel 16 was investigated, and it is found that there are potential problems that must be addressed.

It has been shown that the FCC rules permit the implementation of a new channel 16 DTV station in the New York City area co-channel with existing Public Safety land mobile stations that can cause interference. In fact, an adjacent channel station has recently been issued a construction permit near Philadelphia, PA that will probably cause interference to properly licensed land mobile stations within the land mobile allocation to Philadelphia.

Also W17CR channel 17, though not analyzed in detail, will probably produce interference to nearby public safety base stations as it was shown in the case of WEBR-CA channel 17 similarly sited. The interference from the recently issued construction permit to channel 16 W11BJ, if implemented, is shown to have the potential to reduce the area of coverage of one Suffolk County Police Department station to only 30 percent of the area presently covered.

Preliminary measurements at one New York Police Department site have shown the interference from channel 17 WEBR-CA to be reducing the area of coverage of channel 16 frequencies in use at that site to less than 35 percent of what it would be without the interference present.

Therefore, we request that the Commission permanently reassign TV channel 16 to the use of land mobile communications for the public safety community in the greater New York metropolitan area.

FREQUENCY (MHz)	# OF CSN	# OF MOBLS	CO-CHAN DIST(mi)	DIR. Deg.	CALL SIGN	STATE	ADJ DIST(mi)	DIR. Deg.	CALL SIGN
BEST USEABLE FREQUENCIES - VHF BAND									
153.5300	3	240	29.72	290	KED793	NJ	1.17	38	WPLX726
151.6700	1	0	27.9	204	WPMK746	NJ	0.59	44	WNUJ744
151.0250	5	340	26.41	7	WNLF882	NJ	11.78	312	WNRM842
154.6100	1	0	22.17	353	WPOX628	NY	0	156	WPLP823
159.6900	4	620	18.99	47	WPMV662	NJ	4.9	261	WPQK983
153.5450	7	130	17.21	81	WRY348	NY	13.88	94	WPPT453
151.4000	4	95	14.75	25	KNBI425	NY	4.61	238	KNGC323
151.1900	4	0	13.33	306	WRA626	NJ	1.09	88	KNGZ785
151.0100	4	28	11.78	312	WNRM842	NJ	0.44	345	KEG941
150.8900	10	46	11.64	122	KNDF943	NY	8.48	330	WNVQ907
BEST USEABLE FREQUENCIES - 450 BAND (BASE STATION FREQS)									
451.8000	0	0	135.93	312	WNPQ619	NY	0.87	37	WPPD916
452.9500	0	0	56.75	3	WPMQ955	NY	0.86	85	WPPB524
452.9250	2	1	31.28	49	WPMV844	CT	3.08	96	WPBF230
451.2500	4	18	13.66	285	WPUZ624	NJ	0.93	313	WPPC258
451.2000	4	100	7.24	30	WPRK787	NY	0.93	313	WPPC258
452.9000	2	66	3.08	96	WPBF230	NY	0.79	337	WPMS378
451.8750	11	760	2.65	97	WPMF739	NY	0	156	WPNS794
452.5750	10	1757	1.81	38	WPPH550	NY	0.03	93	WPPV475
452.8250	11	315	1.56	68	WNEA328	NY	0.59	44	WPJZ465
452.4250	16	493	1.31	69	WPMM859	NY	0.47	120	KDB667

Appendix A1

See notes on page A3

FREQUENCY (MHz)	# OF CSN	# OF MOBLS	CO-CHAN DIST(mi)	DIR. Deg.	CALL SIGN	STATE	ADJ DIST(mi)	DIR. Deg.	CALL SIGN
BEST USEABLE FREQUENCIES - 460 BAND (BASE STATION FREQS)									
460.9750	1	0	32.82	86	KRT259	NY	0.59	67	WSW436
462.9250	5	0	8.17	274	WPNQ353	NJ	0	156	WPNS794
460.6750	14	24	6.55	75	KJX291	NY	3.42	97	WPTD807
460.7250	8	180	6.55	75	WNZJ417	NY	0.57	209	WPTW819
460.8750	10	8	6.55	75	KJX291	NY	3.51	140	WPAK474
464.2000	19	579	3.67	26	WPOG482	NY	0.04	0	WNVF603
460.9500	5	0	8.78	200	WPTW819	NY	39.56	88	WPPD615
464.0250	13	430	2.57	275	WNRO772	NJ	0.27	217	KYQ231
463.7000	16	407	2.05	135	WPPT651	NY	0	156	WPCD538
463.2500	18	468	1.68	81	WNGW768	NY	0.44	42	WSN686
BEST USEABLE FREQUENCIES - 800 MHZ BAND									
855.9375	1	0	36.04	300	WPQK799	NJ	1.05	47	KNEH690
858.8375	2	168	27.29	80	KIU751	NY	0.09	53	KNDH643
860.8875	2	0	9.99	246	KNIV727	NJ	1.96	175	KNDH631
856.8875	2	0	9.99	246	KNIV727	NJ	0.08	106	KNDH627
857.8875	2	0	9.99	246	KNIV727	NJ	0.08	106	KNDH635
855.3125	2	0	5.65	167	KNHY619	NY	2.93	200	KNGK513
855.6375	1	0	4.03	175	WPEH546	NY	1.05	47	KNEH690
855.2875	1	0	2.93	200	KNGK513	NY	0.96	91	WNAJ397
855.3375	2	0	2.93	200	WPMJ400	NY	1.05	47	KNEH690
857.8125	1	0	2.93	200	KNIH396	NY	0.47	120	KNIH396

Appendix A2

Appendix A3 See notes on page A3

NOTES:

The above charts represent a sample of frequencies in each band and points out that frequencies are not available for any entity that requires more than one frequency for their communications needs.

The data was obtained through the Communications Engineering Technology data base (now known as Site Safe) using their Autofind Program.

Data was obtained by searching a 50 mile radius of New York City Center with coordinates 40-45-06 / 073-59-39.

A full listing of each band and the results of the search is available in electronic or written form and will be supplied upon request.

Appendix A4

APPENDIX

In order to prevent interference between the proposed land mobile operations on Channel 16 in New York City and the existing television operations of WNEP- TV in Scranton, Pennsylvania on Channel 16 (FCC File Number BLCT-2623) and WPHL-TV in Philadelphia, Pennsylvania on Channel 17 (FCC File Number BLCT- 2611), the proposed land mobile operation will be restricted as follows:
Base station operation is permitted in the five boroughs of New York City and Nassau, Westchester and Suffolk Counties in New York, and Bergen County, New Jersey. Mobile operation is permitted in these counties and boroughs as well as outside these areas provided the distance from the Empire State Building (Geographic Coordinates: 40 <<degrees>> 44' 54" N, 73 <<degrees>> 59' 10" W) does not exceed 48 kilometers (30 miles).

Co-Channel Television Protection

For base stations to be located in the five boroughs that comprise the City of New York and other jurisdictions east of the Hudson River and Kill Van Kull, the maximum effective radiated power (ERP) will be limited to 225 watts at an antenna height of 152.5 meters (500 feet) above average terrain. Adjustment of the permitted power will be allowed provided it is in accordance with the "169 kilometer Distance Separation" entries specified in Table B or prescribed by Figure B of Section 90.309(a)(5) of the FCC Rules.
For base stations to be located west of the Hudson River, the maximum ERP will be limited to the entries specified in Table B or prescribed by Figure B of Section 90.309(a)(5) of the FCC Rules for the actual separation distance between the land mobile base station and the transmitter site of WNEP-TV, Scranton (Geographic Coordinates: 41 <<degrees>> 10' 58" N, 75 <<degrees>> 52' 21" W).
Mobile stations associated with such base stations will be restricted to 100 watts ERP in the area of operation extending eastward from the Hudson River and 10 watts ERP in the area of operation extending westward from the Hudson River. These restrictions offer 40 dB of protection to the Grade B coverage contour of WNEP-TV, Scranton.

Adjacent Channel Television Protection

The above parameters and conditions are considered to be sufficient to protect first-adjacent channel television station WPHL-TV, Philadelphia (Geographic Coordinates: 40 <<degrees>> 02' 30" N, 75 <<degrees>> 14' 24" W). Operation of mobile units within a radius of 48 kilometers (30 miles) from the Empire State Building would be no closer than 8 kilometers (5 miles) from the WPHL Grade B coverage contour. This will offer a 0 dB protection ratio to WPHL- TV.

Low Power Television Protection

LPTV station W17BM has no responsibility to protect land mobile operations on adjacent TV Channel 16 other than from spurious emissions. Land mobile licensees must correct, at their expense, interference caused by their operations to the reception of W17BM within its protected signal contour as defined in Section 74.707 of the FCC Rules.

SEPARATE STATEMENT OF
COMMISSIONER KEVIN J. MARTIN

Re: Amendment of Parts 2, 73, 74 and 90 of the Commission's Rules to Permit New York Metropolitan Area Public Safety Agencies to use Frequencies at 482-488 MHz, Notice of Proposed Rulemaking, ET Docket No. 03-158 and MB Docket No. 03-159.

I strongly support this proposal to permanently reallocate Channel 16 in New York City to land mobile service for public safety communications. The men and women working for New York's public safety agencies learned first-hand almost two years ago how critical reliable communications networks are in times of crisis. The ability to communicate with other public safety personnel can determine the difference between life and death. Harmful interference and inadequate networks can prevent first-responders from doing their jobs – protecting the people of New York – and can endanger their lives.

Over a year ago, I talked with local government officials and members of the public safety community in New York about what steps the Commission could take to improve their plight. Their primary concern was the need for spectrum in the crowded New York City airspace. In discussing the unique spectrum needs of New York – marked by an exceptionally dense population with a high concentration of tall buildings – they emphasized their reliance on Channel 16. In particular, they asked that their temporary authority to use Channel 16 be made permanent, so that they could continue to make the substantial investment necessary in enhancing their use of this frequency.

I am extremely pleased that the Commission is finally acting on this request. It is my hope that the step we take today will facilitate and accelerate the development, integrity, and coordination of these agencies' communications systems.